Iowa Nonpoint Source Management Program Plan

FFY 2014 Annual Progress Report

October 1, 2013 – September 30, 2014

Submitted December 31, 2014

clean water starts with you.

IOWA DNR WATERSHED IMPROVEMENT

The following is a report of progress for the FFY 2014 on Iowa's Nonpoint Source Management Program Plan, for the time period of October 1, 2013 through September 30, 2014. The report was compiled by the Iowa Department of Natural Resources' (DNR) Watershed Improvement Section, which administers the EPA Section 319 grant for Iowa. The core nonpoint source partner agencies and organizations that provided major updates for this report, in addition to Iowa DNR, included the Iowa Department of Land Stewardship-Division of Soil Conservation (IDALS-DCS), the Natural Resources Conservation Service (NRCS), Iowa State University (ISU) and ISU Extension and Outreach (ISUEO), and Conservation Districts of Iowa. All Core Partner responses pertain to FFY 14 activities unless otherwise noted.

The report will follow the structure of the Iowa Nonpoint Source Management Program Plan (2012), which can be accessed electronically on DNR's website at: http://www.iowadnr.gov/Environment/WaterQuality/WatershedImprovement/WatershedPlanning/NonpointSourcePlan.aspx

To help track progress toward completing action steps and tasks, the original completion dates for each action step and tasks are listed below simply as "Completion Date", and progress is identified with one of the following labels: "Complete", "On Schedule", "Behind Schedule", or "Will Not be Completed."

Goal 1: Build partnerships to enhance a collaborative watershed approach to nonpoint source water pollution

Objective 1.1 – Strengthen and Expand Agency Collaboration

Lead Agencies – DNR, DSC, CDI, ISU, NRCS

Action Step 1 – Communicate progress of implementation to the Water Resources Coordinating Council (WRCC) & Watershed Planning Advisory Council (WPAC).

Completion date: This is an ongoing goal

The Core Partners have used the platform of the WRCC and the WPAC to meet as a group and share programmatic progress on the NPSMP and the efforts on the Nutrient Reduction Strategy. Core Partners have presented to these councils in the last year as follows:

- NRCS provided a report on the Regional Conservation Partnership Program during the May, 2014 meeting.
- NRCS has continued its participation in the Measurable Actions Subcommittee of the WRCC.
- ISU sends a representative to the WRCC and attended meetings in 2014. ISU staff served as Chair of the WRCC Nutrient Reduction Strategy Measures Committee. The committee adopted a logic model method of measuring progress toward the NRS goals that was presented at the July 29 WRCC meeting. ISU is summarizing publically available data from IDALS DSC and USDA NRCS on conservation practices that were installed using cost share funding. The data are reported by county and span 2006 to current. The analysis identified challenges to the current reporting system. For example, terraces may be reported by linear foot, acres protected or dollars spent. Buffers may be reported by the acres of buffers or acres protected. ISU has summarized the publically available data from USDA FSA regarding acreage and land use, 2007 to current. The Nutrient Reduction Strategy 2013-2014 annual progress report (through May 30, 2014) is available online below: http://www.nutrientstrategy.iastate.edu/sites/default/files/documents/1314progressreport.pdf

- ISU reported to WPAC regarding progress of the Measures Committee May 23, July 25 and September 26. WPAC collected examples of activities, programs and investments that its members are making to support adoption of the Nutrient Reduction Strategy as requested by the Measures Committee.
- CDI e-mailed a report to the WPAC in May, 2014 reporting progress related to the NPSMP and the NRS.
- DNR reported to the WPAC on September 26, 2014 regarding the status of Watershed Management Authorities, including opportunities and challenges for these organizations in light of limited future funding for ongoing planning and subsequent implementation of their watershed plans. The presentation included a panel discussion of representatives from four of the more active WMA's – Catfish Creek, Turkey River, Indian Creek and English River. DNR is scheduled to provide the WRCC an update on the NPSMP at the WRCC's January 2015 Council meeting.

Goal 1: Build partnerships to enhance a collaborative watershed approach to nonpoint source water pollution

- IDALS… The NPSMP updates will include input from each of the core partner agencies represented in the development of the NPSMP. The Iowa Nutrient Reduction Strategy (developed by DNR, IDALS and ISU) was also discussed at all of the WRCC and WPAC meetings in 2014 (6 WRCC and 5 WPAC meetings) The Iowa Nutrient Reduction Strategy can be found on-line at nutrientstrategy@iastate.edu.
- Meeting minutes from the WRCC meetings can be found at: http://www.agriculture.state.ia.us/WRCCArchives.asp

Goal 1: Build partnerships to enhance a collaborative watershed approach to nonpoint source water pollution

Action Step 2 – Implement Activities and initiatives based on the priorities

Completion date: This is an ongoing goal

- ISU Ag and Natural Resources faculty and staff have partnered in priority watersheds and work to educate farmers on nutrient management, cover crops and other soil and water conservation practices. Jamie Benning was hired as ISU ANR Extension and Outreach Water Quality Coordinator and is leading water quality program efforts. She has identified a core group of ISU ANR staff to increase their skills and programming in water. The nutrient reduction strategy and water quality more generally was included in the Integrated Crop Management conference, late November in Ames 950 agribusiness and farmer participants, Crop Advantage Series, 13 meetings and 2200 participants and numerous other Extension events.
- ISU collaborated with DNR on livestock issues (MAC, Iowa Small Feedlot/Dairy Plan). Work with partners on Iowa Learning Farm educational programming. Participate in NRCS 590 Standard review.
- CDI partnered with DNR, DSC, ISU and NRCS to provided education and training on watershed work and nonpoint source pollution to commissioners through Annual Conference and Spring Regional Commissioner Meetings. 216 commissioners/assistants and 91 field office staff from 85 different counties attended the nine Spring Regional Commissioner Meetings held across the state attended Spring Regional Commissioner Meetings. There were 363 attendees at Annual Conference; 156 of those attendees were commissioner and assistant commissioners representing 71 different counties. CDI partnered with IDALS-DSC to host an annual legislative event at the Capitol in Des Moines to lobby and educate legislators on funding and policy needs to support watershed projects and nonpoint source water pollution. 59 commissioners attended the legislative event representing 37 different counties. CDI partnered with NRCS and IDALS-DSC to fund district staff to perform tasks that address nonpoint source water pollution. Over $1 million was distributed to 75 districts. CDI partnered with the National Association of Conservation Districts to lobby for federal funding and policies to support watershed projects and nonpoint source water pollution.
- IDALS… In 2014, many activities and initiatives prioritized in the NPSMP were implemented, continuing momentum from 2013. Updates have been provided on current watershed projects with approved watershed management plans and updates have been provided by DNR, IDALS and ISU on activities with the Iowa Nutrient Reduction Strategy. This report will be provided when complete to both the WRCC and WPAC. 9 priority HUC 8 watersheds were identified by the WRCC for implementation of the new Water Quality Initiative (WQI). Money was made available state-wide to plant cover crops, add nitrogen inhibitor to fall applied anhydrous, and no/till and strip/till. During 2014, $1.4 million was made available statewide for first-time users of conservation management practices, and the money was obligated in five business days. Additionally, five new demonstration projects were funded in priority watersheds, bringing the total number of Water Quality Initiative projects to 13. These projects will utilize more than $6

Goal 1: Build partnerships to enhance a collaborative watershed approach to nonpoint source water pollution

million in state funding to leverage more than $8 million in other funding for demonstration and implementation of practices identified in the Iowa Nutrient Reduction Strategy.

- DNR collaborated with ISU Extension, NRCS, IDALS, and private partners, including the Iowa Cattlemen's Association, Iowa State Dairy Association, Iowa Farm Bureau, and the Iowa Beef Center, to complete several water quality information projects. They include:
    - "Water Quality Initiatives for Small Iowa Beef and Dairy Feedlot Operations", also called the Small Feedlot Project, a 3-year project completed in 2014, which developed publications on small open lot beef and dairy runoff management, hosted field days at beef and dairy demonstration sites, and developed a DVD on testing open lot runoff. Publications and information may be found at IMMAG website: http://blogs.extension.iastate.edu/iowabeef/2012/04/09/small-beef-dairy-feedlots/
    - Iowa Learning Farms, an ISU-administered project, now in its 10th year, hosting farm field days and providing farm-related water quality information. ILF webpage: http://www.extension.iastate.edu/ilf/
    - "Watershed-Based Community Assessment Toolkit", a project completed through the Iowa Learning Farms, to identify the water quality knowledge of the people in a watershed, to determine the concerns they face, and weigh citizen enthusiasm for implementing a watershed improvement project. The toolkit is available on the ILF webpage: http://www.extension.iastate.edu/ilf/content/watershed-based-community-assessments
    - Water Rocks!, a youth water quality education project, led by ISU staff, with major funding from DNR through EPA 319 funds, which promotes watershed and water quality education for youth through in-school presentations, music videos, and online games. Website: http://www.waterrocks.org/

DNR and IDALS collaborated on four quarterly Basin Coordinator meetings in FY2014 to coordinate watershed activities.

DNR staff, including the NPS Coordinator, participated in NRCS State Technical Committee meetings and subcommittees in FY2014 and helped promote watershed approaches to NRCS programming.

The DNR NPS Coordinator represented DNR on the Iowa Watershed Improvement Review Board, which includes various agency and private group representatives, and which promoted watershed approaches by providing state funding in FY14 to various watershed projects to address nonpoint source pollution: Webpage: http://www.agriculture.state.ia.us/IWIRB.asp

DNR staff helped review Iowa's new NRCS Nutrient Management (590) Standard and incorporate a watershed perspective into the revised (Oct. 2013) standard. Webpage: http://www.nrcs.usda.gov/wps/portal/nrcs/main/ia/technical/ecoscience/nutrient/

Goal 1: Build partnerships to enhance a collaborative watershed approach to nonpoint source water pollution

DNR staff, usually the NPS Coordinator, represented DNR at monthly meetings of the Iowa State Soil Conservation Committee in FY14, and provided DNR water quality information related to watershed approaches to the committee. Webpage: http://www.agriculture.state.ia.us/soilConservationCommittee.asp

Goal 1: Build partnerships to enhance a collaborative watershed approach to nonpoint source water pollution

Objective 1.2 – Organize Soil and Water Conservation Districts to cooperate within watershed boundaries

Lead Agencies – CDI, DSC

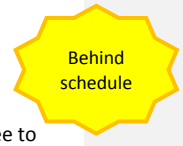
Action Step 1 – Incorporate action steps 2-8 into SWCD 5 year plan and make public via IDALS website

Completion Date: This is an ongoing goal

- In 2014, CDI, IDALS-DSC and NRCS began to discuss the SWCD 5 year plan, annual work plan, NRCS Business Plan, watershed plan and locally led conservation action plan. In 2015, CDI and IDALS will post a consolidated, template plan and process to include steps 2-8 on IDALS website.

Action Step 2 – Joint commissioner and stakeholder meeting visionary session

Completion date: Originally slated for 2013



- CDI co-chaired the locally led conservation subcommittee of the state technical committee to reinvigorate the locally led process. The locally led process involves commissioners holding stakeholder meeting visionary sessions in order to operate on soil and water issues with public input and engagement. CDI surveyed the districts to determine the current amount of sessions being held and at what frequency sessions were held over the past 10+ years. Districts were also asked about challenges associated with facilitating the locally led process. The subcommittee identified strengths, weaknesses, opportunities and threats of the process and shared their vision statement for the processes' reinvigoration. CDI will share this information and the existing guidance for facilitating the locally led conservation process from the National Association of Conservation Districts at the 6 new commissioner trainings being held across the state in 2015. Existing commissioners are encouraged to attend this training as well. The training will be conducted as a webinar also and the link promoted among commissioners, staff and partners.

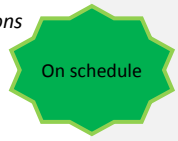
Action Step 3 - Develop a watershed map on display in every SWCD office, use in public and in publications, events.

Completion Date: 2015

- In 2014, CDI requested a District with a watershed map on display in their office and being used in pubic and in publications and events to be the "Initiative of Interest" for the 2015 CDI Winter Quarterly Bulletin, shared with commissioners, staff and partners to promote exchange of ideas. http://cdiowa.org/conservation-districts-of-iowa/programs

Action Step 4 – Communicate available science and needed information to make informed decisions

Completion Date: This is an ongoing goal



Goal 1: Build partnerships to enhance a collaborative watershed approach to nonpoint source water pollution

- CDI provided information to commissioners through bulletins, webinars, meetings and other outreach and education efforts. In the last year, information about watersheds and nonpoint source pollution has been part of those efforts.

Action Step 5 – Host legislative / elected official tours, field days

Completion Date: This is an ongoing goal

- CDI & IDALS-DSC provided districts and commissioners with template documents and instructions for hosting a legislative/elected official event and connecting with their local legislators. It is a goal of the CDI President to have every legislator spoken to by a commissioner during the current legislative session. CDI and IDALS-DSC hosted a legislative event for commissioners at the Capitol in Des Moines. 59 commissioners attended the legislative event representing 37 different counties. CDI leadership has plans to lobby in Washington D.C. during the current legislative session. CDI assists Districts with field days and other outreach activities as requested. In 2014, 6 Soil Health Days were held with NRCS funds CDI administers.

Action Step 6 – Involve media by inviting local media to watershed events

Completion Date: This is an ongoing goal

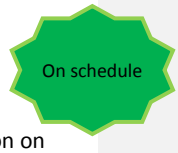
- At the nine 2014 Spring Regional Commissioner Meetings, CDI shared information on the value of engaging media in soil and water conservation events. Examples of how to accomplish media engagement were provided at the meeting, emailed to commissioners, staff and partners and posted on CDI's website for the rest of the year. 216 commissioners/assistants and 91 field office staff from 85 different counties attended these nine Spring Regional Commissioner Meetings held across the state.

Action Step 7 – Plan and provide for volunteer recognition activities and networking events

Completion Date: This is an ongoing goal

- CDI acknowledged volunteers throughout the state annually at their Annual Conference. Those recognized include commissioners, farmers, teachers, watershed projects and others who contribute to soil conservation, clean water and watershed projects. Many Districts conduct volunteer recognition activities locally.

Action Step 8 – Develop local watershed websites



Completion Date: This is an ongoing goal

- At the nine 2014 Spring Regional Commissioner Meetings, CDI shared information on the value of having a district website with local watershed information. Examples of websites were provided at the meeting, emailed to commissioners, staff and partners

Goal 1: Build partnerships to enhance a collaborative watershed approach to nonpoint source water pollution

and posted on CDI's website for the rest of the year. 216 commissioners/assistants and 91 field office staff from 85 different counties attended these nine Spring Regional Commissioner Meetings held across the state.

Action Step 9 – Involve students in local watershed activities

Completion Date: This is an ongoing goal

- CDI implemented the Conservation Poster Contest, which facilitates the learning of watershed issues and expression of these issues through art with students K-12. The contest is implemented through the Soil and Water Conservation Districts. In 2014, 38 districts participated. 33 cash prizes in the amount of $1,230 awarded to youth participants courtesy of Grinnell Mutual. State winning posters were displayed at Annual Conference and were entered into the national competition. CDI conducted the Envirothon, a high school environmental education competition. 250 students made up 50 teams which competed regionally around the state. 75 students made up the 15 teams that competed at the state competition. The Marshalltown High School Envirothon team represented Iowa at the 2014 Regional Stewardship Challenge in Woodstock, Illinois, placing third out of nine teams and winning first place in oral presentation. CDI staff assisted Illinois staff in the planning of the regional challenge. In 2014, CDI invited a student assistant commissioner to speak to commissioners at Annual Conference, showing them the value of involving youth in their activities and challenging them to do so.

Goal 1: Build partnerships to enhance a collaborative watershed approach to nonpoint source water pollution

Objective 1.3 – Develop local comprehensive visions and action plans for nonpoint source water quality within the HUC-12 watershed.

Lead Agencies: DNR, CDI, DSC

Action Step 1 – State and federal agencies should provide watershed education, guidance, tech support to local stakeholders

Completion Date: 2013

- NRCS provided technical support to ongoing and developing projects in the Middle Cedar River watershed. This helped support the development of a proposal to the Regional Conservation Partnership Program (RCPP). NRCS, individually and as part of partnerships, also provided technical support related to cover crops and soil health to farmers and partner employees. NRCS field and area staff continue to provide ongoing technical support for project development, conservation planning and practice implementation.
- CDI provided information to commissioners through bulletins, webinars, meetings and other outreach and education efforts. In the last year, information about watersheds and nonpoint source pollution has been part of those efforts. CDI also provided, with NRCS and IDALS-DSC, funds for district staff to provide conservation assistance to local stakeholder projects. Over $1 million was distributed to 75 districts. CDI implemented a program in 2014 in which 10 commissioners who were farmers using cover crops were recruited and trained to conduct education and outreach on cover crops. These 10 Champion Cover Crop Commissioners sent letters and information to support 939 farmers using cover crops for the first time; delivered information about cover crops to 805 farmers during meetings, workshops and field days; connected with 61 agribusiness personnel about cover crops and participated in print and radio media interviews about cover crops to readership/listenership of over a half million. CDI also hosted a cover crop booth and demo plot with farmers at the Farm Progress Show to bring cover crop information to attendees.
- DNR provided ongoing GIS technical support in 2014 to help local watershed groups complete watershed assessments in support of watershed projects or to develop or update watershed plans.
- DNR provided financial and technical assistance in 2014 to Watershed Management Authorities (WMAs) to develop new WMAs and/or to enhance the work of existing WMAs to educate the public and provide resources for watershed planning. More information on DNR webpage:
- http://www.iowadnr.gov/Environment/WaterQuality/WatershedManagementAuthorities.aspx
- DNR in 2014 continued to provide financial support, along with agency partners, to the Iowa Learning Farms Project 2014 activities, which provides water quality education to farmers, agencies, and private ag groups. DNR has provided support to ILF for more than 10 years. More information on ILF webpage: http://www.extension.iastate.edu/ilf/
- DNR in 2014 continued to provide financial support to the Water Rocks! Project, which provides water quality education to youth in Iowa through in-school classroom presentations, music

Goal 1: Build partnerships to enhance a collaborative watershed approach to nonpoint source water pollution

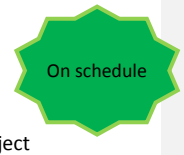
videos, video games, its webpage, and through teacher education. More information: http://www.waterrocks.org/

Action Step 2 – Empower Commissioners with training, water quality knowledge (SWCDs)

Completion Date: 2014

- CDI provided commissioners with training and water quality knowledge at the 9 Spring Regional Commissioner Meetings and Annual Conference. 216 commissioners/assistants and 91 field office staff from 85 different counties attended these nine Spring Regional Commissioner Meetings held across the state. There were 363 attendees at annual conference, 156 of the attendees were Commissioners and Assistants representing 71 SWCDs.
- DNR provided in 2014, for the 18 existing DNR Section 319 watershed projects, ongoing activities to train and educate commissioners on water quality, including annual field days, annual project meetings, water monitoring information, and special project events. DNR also provided information to commissioners about 319 projects at the annual CDI conference in September of 2014, attended primarily by SWCD commissioners. The DNR NPS Coordinator provided monthly updates in 2014 to the State Soil Conservation Committee, made up primarily of SWCD Commissioners, on water quality and other natural resources issues.

Action Step 3 – Identify local support, individuals, and groups (in addition to SWCDs)



Completion Date: 2015

- NRCS field and area staff continued to provide ongoing technical support for project development, conservation planning and practice implementation.
- CDI showcased unique partnerships between SWCDs and local and federal governments, the private sector and agricultural, hunting and environmental groups at the Spring Regional Commissioner Meetings and at Annual Conference. CDI featured these partnerships under their quarterly bulletin section, “Initiatives of Interest”.
- DNR in 2014 provided financial support and GIS assistance to Watershed Management Authorities (WMAs, as reported elsewhere in this report)
- IDALS – In 2014, watershed projects applying for funding through WIRB, WPF/WSPF, Section 319, and SRF Sponsored Projects were required to identify local project partners, local sources of funding, and local leaders participating in watershed projects. Existing watershed projects in 2014 identified local support and local partners (individuals and groups) in their annual project workplans.

Action Step 4 – Continue to fund development and planning grant processes

Goal 1: Build partnerships to enhance a collaborative watershed approach to nonpoint source water pollution

Completion Date: This is an ongoing goal

- DNR did not offer Watershed Planning Grants in 2014, due to recent declines in federal 319 funding and on DNR's intent to focus 319 implementation dollars on existing 9-element plans, rather than on developing new plans. However, in 2014 the DNR GIS Specialist continued to provide GIS assistance for local groups conducting watershed assessments for DSC Watershed Development Grants and/or to update existing watershed plans. The DNR Basin Coordinator also provided technical assistance to DSC Watershed Planning and Development Grants in the Upper Des Moines, Raccoon, Cedar, and Iowa River basins. DNR in 2014 also provided financial and technical assistance for the development of the Rathbun Lake Interim Watershed Plan, which allowed the Rathbun Lake Watershed Project to implement 319-funded watershed project activities.
- IDALS - DSC continued to provide funding in 2014 for its watershed planning and development grants, which fund watershed assessment and project planning. Two solicitations for funding were completed. Four SWCDs were selected for funding in April 2014, and eleven more proposals are being reviewed for funding, with decisions anticipated in early 2015. For more information: http://www.iowaagriculture.gov/requestForApplications.asp.

Action Step 5 – Form watershed steering committee

Completion Date: 2014

- CDI - There are many watershed projects, management authorities and demo projects active in the state. Commissioners serve on all of these committee's in some capacity.
- DNR supported watershed steering committees through its Section 319 funding watershed projects, many of which have formed watershed steering committees.
- IDALS - Many existing watershed projects funded by IDALS and DNR in 2014 had watershed steering committees or technical advisory committees, which usually included at least one SWCD commissioner. Nearly all watershed projects in 2014 were implemented through SWCDs, in partnership with a project coordinator and other local partners.

Action Step 6 – Dedicate funding

Completion Date: This is an ongoing goal

- CDI lobbied on the state and federal level for dedicated funding to soil conservation, clean water and watershed projects. CDI and IDALS-DSC provide legislative toolboxes for districts and commissioners to educate and lobby state and federal legislators. CDI partnered with NRCS and IDALS-DSC to fund district staff to perform conservation activities. Over $1 million was distributed to 75 districts.
- IDALS continued to provide watershed project funding in 2014 through WPF and WSPF funding. The Water Quality Initiative (WQI) was a new initiative in 2014 which provided funds to

Goal 1: Build partnerships to enhance a collaborative watershed approach to nonpoint source water pollution

watershed projects to reduce nutrients to begin implementing Iowa's nutrient reduction strategy. For more information on WQI: www.iowaagriculture.gov.

- Funding was also provided for watersheds in 2014 through the Watershed Improvement Review Board (WIRB).
- DNR in 2014 provided at least 50% of its 319 grant funding to implement watershed project activities. Half of the FFY2014 Section 319 grant, $1,738,000, went to implement watershed project activities.

Action Step 7 – Dedicate staffing for each watershed project

Completion Date: This is an ongoing goal

- DNR in 2014 provided 319 funding to pay for staffing a watershed project coordinator, usually through a SWCD or IDALS-DSC, for most of its 18 existing watershed projects
- IDALS - Nearly all watershed projects in 2014 had at least a .5 FTE assigned to the watershed. Many watershed projects were staffed by a full-time watershed project coordinator, depending upon funding availability and workload requirements.

Goal 1: Build partnerships to enhance a collaborative watershed approach to nonpoint source water pollution

Objective 1.4 – Implement Smart Planning principles, as provided by Code of Iowa at watershed level.

Lead Agencies: DNR, DSC, ISU

Action Step 1 – Develop and deliver a pilot educational program in one or more of the six major river basins or three river regions that informs communities about how NPS pollution can be reduced by utilizing Smart Planning principles and comprehensive planning elements in planning, zoning and resource management decision-making

Completion Date: 2014

- DNR - As reported for FFY13, DNR contracted with the Iowa Stormwater Education Program to conduct a "Watershed Planning for Communities" training program to encourage a planning approach that integrates community based planning with watershed planning and management. The curriculum was developed in FFY12 and FFY13, and one workshop was held in FFY13. Two workshops were held in FFY14. The first was held in Ankeny, Iowa in conjunction with the Iowa Association of Regional Councils of Government annual retreat on October 28, 2013 with 46 participants. The second was held on November 18, 2013 in Marion, IA, where the Indian Creek Watershed Management Authority had been recently formed, with an attendance of 97. Both the FY14 workshops exceeded the goals for participation.

Action Step 2 – Provide financial incentives to encourage multi-jurisdictional Smart Planning emphasizing NPS reduction

Completion Date: This is an ongoing goal

- DNR - Perhaps the best model for multi-jurisdictional Smart Planning in Iowa at the watershed scale is occurring now through the Watershed Management Authorities. To support this type of watershed planning, DNR awarded funding to three WMAs in FFY14:
    - English River WMA received $149,995 in Section 319 funding
    - Turkey River WMA received $73,200 in Section 604(b) funding and $13,425 in Section 319 funding
    - Indian Creek WMA received $37,000 in Section 319 funding
    - A second RFP was opened in August 2014 for additional funding to support WMA planning efforts. Two WMAs were selected to receive funding: Mud, Spring, Camp WMA and Walnut Creek WMA. At the time of writing, the contracts were not yet executed and are expected to begin in FFY15.

Action Step 3 – Take steps to promote the implementation of Smart Planning Principles: a) Incentivize stormwater management systems (site- and community-scale) that not only mitigate potential flooding, but also mitigate NPS pollution and b) Expand the outreach efforts of Iowa Stormwater Education Program to reach non-MS4 communities and other watershed organizations.

Goal 1: Build partnerships to enhance a collaborative watershed approach to nonpoint source water pollution

On schedule

Completion Date: This is an ongoing goal with part a) due in 2023 and b) in 2015

- ISU – Conducted 11 local workshops 2014 that featured Iowa's Smart Planning Principles. Locations for the workshops include Okoboji, Carroll, Decorah, Clear Lake, Cedar Rapids, Sioux City, Oskaloosa/Ottumwa, Pleasant Hill, Harlan/Shelby County, Waukee, and Creston and attracted personnel from surrounding communities. The workshops tallied more than 250 total attendees including officials from at least 75 communities.
- DNR – Part a) During the 2009 Iowa General Assembly session, legislation was passed to allow a new method for funding water quality protection. SF 339 amended the Iowa Code to add a new category of projects that can be financed with sewer revenues. This new category, called "water resource restoration sponsored projects," includes locally directed, watershed-based projects to address water quality problems. This program has been implemented through the Clean Water State Revolving Fund (CWSRF), a loan program for construction of water quality facilities and practices.

  On a typical CWSRF loan, the utility borrows principal and repays principal plus interest and fees. On a CWSRF loan with a sponsored project, the utility borrows for both the wastewater improvement project and the sponsored project. However, through an overall interest rate reduction, the utility's ratepayers do not pay any more than they would have for just the wastewater improvements. Instead, two water quality projects are completed for the cost of one.

  In FFY14, the following projects were initiated. The total amount allocated to these projects was $12,157,000.

SRF Number	Applicant	Project Description
WRR13-002	City of Blakesburg	Address gully erosion with grade stabilization
WRR13-017	City of Buffalo	Bank stabilization in park on Mississippi River
WRR13-003	City of Cedar Rapids	Address erosion in Noelridge Park, which drains to McLoud Run
WRR13-011	City of Clinton	Infiltrate storm water to reduce contaminants and runoff to combined sewer system
WRR13-009	City of Coggon	Cost-sharing of ag practices with the Soil and Water Conservation District

WRR13-007	City of Davenport	Permeable paving on streets and sidewalks, use of street trees
WRR13-001	City of Donnellson	Includes urban practices and cost-sharing of ag practices with the Soil and Water Conservation District
WRR13-029	City of Durant	Realignment of storm sewers to convey storm water to constructed wetlands, streambank stabilization
WRR13-023	City of Fort Dodge	Streambank stabilization on Soldier Creek and improvements related to Badger Lake Watershed plan
WRR13-019	City of Fort Madison	Streambank stabilization with floodplain restoration
WRR13-010	City of Granger	Streambank stabilization, bioswale with native vegetation
WRR13-021	City of Keokuk	Infiltration of storm water using permeable paving to reduce runoff to combined sewers
WRR13-012	City of Kingsley	Infiltrate storm water in rain gardens, bioswales
WRR13-006	City of Laurens	Infiltration of urban storm water via bioswales
WRR13-013	City of Lohrville	Infiltrate storm water in rain gardens, bioswales, retention practices
WRR13-008	City of Monona	Urban practices to prevent erosion and runoff
WRR13-005	City of New London	Streambank stabilization, erosion control practices on ag land, urban bioretention
WRR13-026	City of Ottumwa	Increase infiltration of storm water through soil quality restoration, decrease streambank erosion

WRR13-022	City of Prairie City	Treat urban storm water in bioswale with bioretention cells, bioretention/detention pond
WRR13-020	City of Seymour	Infiltration of urban storm water via bioswales
WRR13-004	City of Sioux City	Streambank and streambed stabilization along with reorientation of storm sewer outlets and study of additional upland practices, prairie and savannah restoration
WRR13-014	Wastewater Reclamation Authority	Restoration of riparian buffer and flood plain along Four Mile Creek

- Part b) As described above, ISWEP was contracted to develop and deliver a training program to provide education on watershed-based community planning. Also, the DNR Iowa-Cedar Basin Coordinator participated in a webinar geared for new stormwater coordinators and watershed project coordinators, providing an overview of watershed assessments. In addition, ISWEP will be invited to participate in upcoming statewide meeting of Watershed Management Authority coordinators, to discuss the role they can plan in education. The statewide WMA meeting is being planned for January 2015.

Action Step 4 – Encourage rural-urban collaboratives to address agricultural and natural resource preservation, with an emphasis on NPS pollution reduction

On schedule

Completion Date: This is an ongoing goal

- DNR assisted the City of Cedar Rapids and other partners with developing a proposal to the Regional Conservation Partnership Program. If funded, the project would provide planning and outreach to support to two existing Water Quality Initiative projects in Iowa (Miller Creek and Benton/Tama Nutrient Reduction) that cover five HUC-12 watersheds in the Middle Cedar HUC-8. The project is an ideal urban-rural partnership, in which the City of Cedar Rapids would provide financial support for conservation efforts that would ultimately reduce nitrates in the Cedar River and reduce flood risk in Cedar Rapids. Cedar Rapids obtains its drinking water from shallow alluvial wells along the Cedar River which can be affected by nitrates in the river.
- IDALS - DSC Regional Basin Coordinators worked with several communities considering the use of SRF Sponsored Project funding to consider watershed-level nonpoint water quality improvement projects, including combinations of urban and agricultural conservation practices.

Goal 1: Build partnerships to enhance a collaborative watershed approach to nonpoint source water pollution

Additionally, DSC issued a Request for Pre-Proposals to fund Urban Conservation demonstration projects through the Water Quality Initiative.

Goal 1: Build partnerships to enhance a collaborative watershed approach to nonpoint source water pollution

Objective 1.5 – Increase coordination between public and private entities to better leverage existing funding

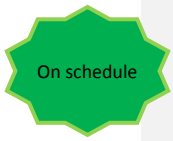
Lead Agencies: DNR, DSC

Action Step 1 – Identify points of contact at statewide level for public and private entities to develop a mechanism for delivery

Completion Date: 2013/ongoing

- The Regional Basin Coordinators (RBCs) were identified at the statewide level in 2014 using coverage maps and contact information on the Iowa DNR and IDALS websites, including e-mail and telephone contact information. For more information: http://www.iowadnr.gov/Environment/WaterQuality/WatershedImprovement/ContactWatershedStaff.aspx
- These coordinators furnish quarterly reports which indicate that at least 150 contacts with public and private partners were completed during the program year. DNR and IDALS-DSC coordinated use of resources with state-level project management staff through four quarterly in-person meetings in 2013 and in 2014 to address water quality needs.

Action Step 2 – Regional Basin Coordinators identify partners and develop a plan to initiate communication partners



Completion Date: 2013/ongoing

- The RBCs worked with watershed project coordinators in 2014 to identify individual and agency partners within their watersheds, and to work with these partners to develop and implement a communication strategy as part of the annual watershed project workplan. These communication and outreach strategies were completed for watershed projects funded by Section 319/WPF/WSPF, WIRB, WQI, and by NRCS.

Action Step 3 – Project Coordinators assist RBC to identify local community partners

Completion Date: 2013/ongoing

- Project coordinators communicated regularly with RBCs and with local community partners on an ongoing basis in 2014 to implement water quality plans and projects. Additionally, Project Coordinators met twice with RBCs and agency staff during the year, once at the statewide level and once at the regional level, to communicate project progress and issues with current or planned projects.

Action Step 4 – RBC and PC refine message to applicability of local watershed

Completion Date: This is an ongoing goal

Goal 1: Build partnerships to enhance a collaborative watershed approach to nonpoint source water pollution

- Project coordinators and RBCs worked throughout the year to incorporate priorities established in the Water Quality Initiative into current projects, including active Section 319 projects, Targeted Demonstration projects, and in updates to 40 completed watershed assessments and development of new assessments.

Action Steps 5 and 6 have an original expected completion date of 2015.

Action Step 5 – Establish a mechanism to facilitate communication with public and private entities

- DNR and DSC staff, including RBCs and PCs, have contributed information for the release of the CleanwaterIowa.org website, which is intended to provide information on statewide water quality programs and initiatives. Over30 watershed project meetings and field days were also conducted with partners and other interested entities in 2014. Regional meetings were held statewide with Conservation Districts of Iowa, and monthly meetings with the State Soil Conservation Committee were completed in 2014 to further engage stakeholders.

Action Step 6 – Plans are prepared, reviewed, and presented. Include a section to address identifying all potential funding sources, including but not limited to public and private

- During the year, several plans were developed and adopted to address lake quality, watershed improvements, and reduction of nutrient runoff into lakes and streams. Those plans were used by districts and watershed groups to access funding from state and federal water quality cost-share programs.
-

EPA: I believe this action step was intended to include private sources as well. Did these plans also make an effort to identify private sources?
DNR: Nearly all plans identify local private landowners as a source of funding for BMPs on private land (often at 25% of total BMP cost), but many plans also identify other private funding sources--such as the Izaak Walton League, Coca Cola, and the Iowa Soybean Association—especially if those private sources have an interest in water quality improvements in that watershed.

Goal 2: Improve technical assistance, outreach and education to facilitate NPS assessment, planning and implementation

Objective 2.1 – Build local and mutual accountability through community-based watershed and other groups to set expectations for conservation behavior.

Lead Agencies: ISU, CDI

Action Step 1 – Set watershed goals at the district level for soil conservation and water quality improvement including measures to track goals, timelines, and priorities.

Complete

Completion Date: 2014

- Local watershed goals for soil conservation and water quality improvement are part of the additional watershed projects funded by the state for the Nutrient Reduction Strategy. These projects set priorities, track goals and are done on a timeline.
- CDI encouraged all Districts to set goals for soil conservation and water quality improvement and to set priorities and track goals through the creation and maintenance of Soil and Water Conservation 5 year Resource Plans and Annual Work Plans.
- ISU - Two of the farmer-led watershed groups that were established in 2009-2010 have continued to work on water quality goals through obtaining IDALS Water Quality Initiative Demonstration Project funding in 2014.
    - W***est Fork Crooked Creek Water Quality and Soil Health Initiative*** **Grant award**: $484,250 **Total project**: $866,800, **Project leaders**: Washington SWCD **Partners**: Keokuk SWCD, USDA Natural Resource Conservation Service, Iowa State University Extension **Details**: The West Fork Crooked Creek Water Quality and Soil Health Initiative will demonstrate and accelerate the adoption of conservation practices that have been proven to be most effective in reducing nitrate-N and phosphorus in streams. This project will build upon work completed in the one portion of the designated watersheds and demonstrate the effectiveness and adaptability throughout the larger project area.
    - ***Cedar Creek Partnership Project*** **Grant award:** $288,000 **Total Project:** $837,650 **Project leaders:** Wapello SWCD **Partners:** Keokuk SWCD, Jefferson SWCD, Pathfinders RC&D, ISU Extension and Outreach, Golden Furrow Fertilizer **Details:** The Cedar Creek Partnership Project looks to build on past efforts in the area to help spread adoption of practices into watersheds that haven't had similar focus levels in the past. The Cedar Creek project has developed multiple partnerships to help deliver a clear, consistent message and leverage resources to reach a broader audience.

Action Step 2 – Plan and incorporate community-based watershed leadership training into watershed coordinator in-service meetings and soil commissioner professional development

Complete

Completion Date: 2014

- CDI – Provided training to commissioners during Spring Regional Commissioner Meetings and an Annual Conference.

Goal 2: Improve technical assistance, outreach and education to facilitate NPS assessment, planning and implementation

- CDI dedicated a portion of the upcoming Annual Conference to the education of watershed coordinators and New Commissioner training will be held in addition to the two other commissioner training opportunities listed above.
- ISU… Jamie Benning led a discussion that included DNR, IDALS, NRCS, Iowa Farm Bureau, Iowa Corn Growers, Iowa Soybean Association, Iowa Environmental Council, The Nature Conservancy, on December 11, 2014 to establish preliminary plans for a Watershed Academy to address technical training, on-farm experience, project planning and management, and other professional development needs for watershed coordinators and others that provide watershed technical support. It is anticipated that the first Watershed Academy event will occur in the summer of 2015 and other professional development opportunities for watershed coordinators and those providing watershed technical assistance.

Action Step 3 – Connect districts with community-based watershed leaders through district meeting involvement

Completion Date: 2014

- ISU - Jamie Benning presented at the Southeast Iowa Watershed Coordinator regional meeting on November 5, 2014 on connecting with Extension specialists and resources. Benning offered to host webinars with project coordinators and two have been in 2014 and another is scheduled for January 2015. Webinar topics include Bioreactors, Strip-till and No-till, and Prairie STRIPS and have featured ISU faculty and staff, local farmers, and SWCD and NRCS technical specialists as presenters. The following table represents outreach meetings.

EPA: What is this table? The previous bullet point doesn't seem to be referencing these meetings. Is there a description missing?
DNR: The table below is a list of ISU Extension Outreach meetings in FFY2014.

Date	Location	Topic	Audience	attendance
27-Feb	Algona, IA	Iowa Nutrient Reduction Strategy	Farmers	60
6-Mar	Washington	Iowa Nutrient Reduction Strategy (brief comments)	Farmers	110
18-Mar	Lenox	Iowa Nutrient Reduction Strategy	Farmers	45
20-Mar	Harrison Co-Dunlap and Beebeetown	Iowa Nutrient Reduction Strategy	Farmers	50
25-Mar	Osage	Cover Crops in Livestock Systems	Farmers	40
26-Mar	Chariton	Cover Crops in Livestock Systems	Farmers	40
27-Mar	Shenandoah	Iowa Nutrient Reduction Strategy	Farmers, CCAs, NRCS	20

Goal 2: Improve technical assistance, outreach and education to facilitate NPS assessment, planning and implementation

13-Jun	Altoona, IA	Iowa Nutrient Reduction Strategy	Landowners	50
23-Jun	Primghar, IA	Iowa Nutrient Reduction Strategy	Farmers	60
20-Aug	Waverly IA	Iowa Nutrient Reduction Strategy	Farmers and NRCS	40
9-Sep	Nashua, IA	Iowa Nutrient Reduction Strategy	Women landowners and NRCS	6
22-Sep	Wapello County	Cover Crop Management	Farmers and NRCS	20
5-Nov	Washington, IA	Connecting with Extension	SE IA watershed coordinators and agency staff	35

Goal 2: Improve technical assistance, outreach and education to facilitate NPS assessment, planning and implementation

Objective 2.2 – Implement a "conservation central" system to consistently deliver local collaborative public and private technical and financial help across Iowa.

Lead Agencies: NRCS, DSC

Action Step 1 – Identify one group to take ownership of website and one individual to serve as primary point of contact for website

Completion Date: 2013

Behind schedule

- The cleanwateriowa.org website was established in 2013 but does not yet serve all "Conservation Central" functions.

Action Step 2 – Identify partnering agency points of contact to support the overall site development and provide key information to be housed on the website

Completion Date: 2013

Behind schedule

- The NRCS Public Affairs Specialist has agreed to provide key information to be housed on the website. However, there is a need for periodic reminders from the Conservation Central site manager to the other agencies to provide program and other information updates
- IDALS - For 2014 and later, the NRCS Public Affairs Officer has agreed to provide key information to be housed on the website. Since the cleanwateriowa.org website is managed by the IDALS DSC Communications Specialist, Jackie Suckow, NRCS proposed that the DSC Communications Specialist lead efforts to coordinate this information, and DSC has agreed to do so. In addition to the NRCS Public Affairs Officer, other agency points of contact for the website would include the DNR Information Specialist, the ISU Water Quality Coordinator, the CDI Executive Director and the IDALS Nutrient Reduction Strategy Coordinator. New nonpoint source information can be added to the existing link: www.cleanwateriowa.org/nonpoint
- Ongoing information coordination could also be formalized through the Water Resources Coordinating Council (WRCC).

Action Step 3 – Secure website; suggested site name – www.iowaconservationcentral.org

Completion Date: 2013

Complete

- This action step was completed in 2013

Action Step 4 – Develop and populate website information and links

Completion Date: 2014

Complete

- IDALS - The cleanwateriowa.org website was developed in late 20[illegible] The website was frequently updated by DSC staff throughout 2014.

On schedule

Goal 2: Improve technical assistance, outreach and education to facilitate NPS assessment, planning and implementation

Action Step 5 – Market site availability to conservation partners and public

Completion Date: 2015

- Marketing of the Cleanwateriowa.org website occurred frequently during 2014, with pop-up banners purchased for display at several conferences and trade shows, and through launch of the site's social media campaigns on Twitter and Facebook.

Action Step 6 – Maintain and update site via automatic updates through RSS feed and contact with partnering agency POCs

Completion Date: This is an ongoing goal

- This action was initiated and maintained in 2014

Action Step 7 – Evaluate and assess the future viability of site based on use and cost efficiency

Completion Date: 2016

- No progress on this step in past year

Goal 2: Improve technical assistance, outreach and education to facilitate NPS assessment, planning and implementation

Objective 2.3 – Develop a consistent, understandable message about conservation set for delivery by multiple groups.

Lead Agencies: DSC, DNR, ISU

Action Step 1 – Utilize the Iowa Learning Farms' tagline "Building A Culture of Conservation." Develop a list of ten principles or actions that would be associated with this campaign and based on soil and water conservation BMPs. A core group with representation from IDALS, IDNR, NRCS, CDI and ISU would decide these steps. The ten actions will include at least two urban conservation ones.

Complete

Completion Date: 2013

- ISU – efforts were focused on raising the environmental literacy of all Iowans with a statewide education campaign focused on the youth. This campaign builds on the principles of "Building a Culture of Conservation" with a special emphasis on water. This program "Water Rocks!" began with school visits in the spring of 2012 and was fully launched in the fall of 2013 with a multi-media outreach campaign. Since starting this program 117 events have been conducted reaching 11,807 individuals, primarily youth.
- DNR participated at the Steering Committee meeting for the Iowa Learning Farms in April and September to continue to guide messaging development and delivery of the "Culture of Conservation." In addition, DNR serves as the contract manager of the Water Rocks! project and reviews/approves the project plan and budget for this project. Further, DNR served as an observer for one day of the inaugural Water Rocks! teachers' training summit held in June at ISU.

  EPA: Were the ten principles finalized? It looks like maybe they have not been yet, so this hasn't been completed?
  DNR: Although the tagline "building a culture of conservation has been utilized, we don't believe a list of ten principles or actions has been developed. So, although this action step is listed above as "complete", it is actually not completed.

Action Step 2 – Get environmental groups, agencies, municipalities and agricultural interests to endorse the above statement and action steps.

Behind schedule

Completion Date: This is an ongoing goal

- Iowa Farm Bureau is an active participant in the Iowa Learning Farms Steering Committee.

Action Step 3 – Build an infrastructure of support for the Executive Director of the Conservation Districts of Iowa to help build a consistency of conservation message among the SWCD commissioners in the 100 SWCD in Iowa. NRCS, through DCs, will utilize their monthly meetings with SWCD commissioners to raise their environmental literacy. IDALS will take leadership on raising environmental literacy of the SWCD secretaries.

On schedule

Goal 2: Improve technical assistance, outreach and education to facilitate NPS assessment, planning and implementation

Completion Date: This is an ongoing goal

EPA: Please address the part of the action step that refers to NRCS and the SWCD commissioners as well if possible. I only see the secretaries mentioned here. Is NRCS working toward this if they have not already committed to it during the last two years?
DNR: NRCS confirmed that DCs and other NRCS staff provided information to raise SWCD Commissioners' environmental literacy in FFY14 through: discussion about completing conservation planning with landowners to achieve environmental improvements, and discussion about adhering to National Environmental Policy Act (NEPA) requirements to achieve environmental improvements through NRCS conservation practice implementation.

- IDALS secretaries participated in numerous professional development opportunities in 2014 designed to raise their environmental literacy, including one-on-one training with DSC Central Office staff, participation in CDI regional commissioner meetings with technical expert presentations, and ongoing peer dialogue regarding availability of technical and financial tools.

Action Step 4 – Iowa State University, through Iowa Learning Farms and Extension and Outreach, will continue to supply all groups, especially SWCD Commissioners, educational and outreach materials based on research and data on conservation BMPs.

Completion Date: This is an ongoing goal

- Iowa Learning Farms supplied outreach to SWCD through events throughout Iowa (see Iowa Learning Farms activities webpage: http://www.extension.iastate.edu/ilf/. In addition to numerous field days and community events, ILF has supplied materials to watershed groups and SWCD so that they can hold their own events. Materials include DVDs on cover crops, strip tillage, grassed waterways and other conservation practices and the conservation information series "It Begins with You". Over 3,000 DVDs and information sheets were distributed throughout Iowa during this period.

  EPA: Is this action especially focused on the SWCD commissioners as the action step states? Maybe that is something to focus on going forward?
  DNR: Iowa Learning Farms outreach is for the commissioners, farmers, and the broader conservation community, but is not exclusively for SWCD commissioners. A separate proposed 319 project that would have focused exclusively on outreach to SWCD commissioners was vetoed by DNR management.

Goal 2: Improve technical assistance, outreach and education to facilitate NPS assessment, planning and implementation

Objective 2.4 – Develop a visioning process for HUC-8 watersheds in Iowa.

Lead Agency: DNR

Action Steps 1 – 4 were completed at the HUC-10 scale in 2012 - 2013. Despite attempts by Iowa DNR in FFY14 to identify a watershed that was interested in serving as a pilot for a visioning exercise, no suitable HUC-8 was identified due to lack of interest. Therefore, there is no progress to report on these Action Steps.

EPA: Is there a "Guide for Communities"? I can't tell because it says it was completed but also that there wasn't a watershed interested.
How does this relate to the 2013 Annual Progress Report which states that the pilot is the Indian Creek watershed?
DNR: The "Guide for Communities" has not been completed. Indian Creek was a pilot watershed for visioning at the HUC-10 scale, as DNR has learned that there is interest in visioning at the HUC-10 scale, but not at the HUC-8 scale so far.

Action Step 1 - Determine participants and hold first meeting.

Action Step 2 - Determine how vision will be used, Determine who will use the vision (audience).

Action Step 3 - Research / Identify the following: existing models for Visioning; engaging the public; identifying major players at local, state, federal level who are involved in watershed planning; existing / relevant data sources.

Action Step 4 - Develop Visioning process using information gathered in Action Step #3; Organize key issues / chapters; Write "Guide for Communities."

Action Steps 5 through 7 are originally scheduled for completion in 2015 or later. There is no progress to report on these Action Steps.

Action Step 5 - Conduct 3 pilots (east, central, west Iowa); evaluate effectiveness of the visioning process and guidebook; revisions as needed.

Action Step 6 - Develop prioritized list of HUC-8s for implementation; Conduct HUC-8 Visioning in Iowa.

Action Step 7 - Identify HUC-12s with active groups prior to kicking off Visioning in each HUC-8; Coordinate Visioning in partnership with HUC-8s.

Goal 2: Improve technical assistance, outreach and education to facilitate NPS assessment, planning and implementation

Objective 2.5 – Develop and implement a statewide campaign to inform people about water quality issues, motivate involvement, and change behavior.

Lead Agencies: DNR, DSC, ISU, NRCS, CDI

Action Step 1 – Conduct a survey which would establish a baseline of public understanding and willingness to participate prior to the campaign.

Behind schedule

Completion Date: 2014

EPA: The survey hasn't been conducted yet, so this is not completed, yet, correct?
DNR: Not completed yet.

- Representatives from DNR, ISU, IDALS, NRCS, and CDI met to initiate the design of a general public survey. The objective of the survey will be to understand public understanding of water quality issues and attitudes toward actions leading to water quality improvement. The results of the survey will inform activities in objectives 2.5.2 through 2.5.4. As of the end of the reporting cycle, the DNR had solicited proposals from the three state Regents institutions (University of Iowa, Iowa State University, University of Northern Iowa) to conduct the survey. Survey work is planned for calendar year 2015.

Action Step 2 – Tools and training plan developed for agency professionals to provide effective outreach programming to public. Audience survey developed.

Behind schedule

EPA: Was the audience survey developed?
DNR: Not developed.

Completion Date: 2014

- ISU-College of Agricultural and Life Sciences (CALS) applied a watershed mapping tool developed by USDA-Agricultural Research Service (ARS) to evaluate the Water Quality Initiative (WQI) priority watersheds and is communicating with watershed coordinators.
- Jamie Benning (ISU) developed a grant proposal for a Watershed Academy to provide training and CEUs for agency and extension staff and private sectors professionals working with watershed groups.
- DNR provided Section 319 funding and technical assistance to the Iowa Learning Farms for the completion of a Watershed-based Community Assessment, which was completed in early 2014, and is now available on the ILF webpage: http://www.extension.iastate.edu/ilf/content/watershed-based-community-assessments

Action Step 3 – Mass media campaign developed utilizing free media, social media and display materials for outreach opportunities.

Behind schedule

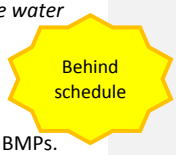
Goal 2: Improve technical assistance, outreach and education to facilitate NPS assessment, planning and implementation

Completion Date: 2014

EPA: What is the campaign that was developed?
I think this objective got confused between Action items 1-3. Isn't this (and step 2) supposed to be based on the results of the survey that won't be conducted until 2015?
DNR: The mass media campaign has not yet been developed, because the statewide survey has not been completed. What was reported below refers to other types of water quality information dissemination from ISU.

- ISU departments coordinated with Iowa Learning Farm to develop and disseminate information.
- Iowa Learning Farms, IDALS, IA DNR, and Iowa NRCS utilized various social media outlets to inform people of water quality issues to help change behavior.

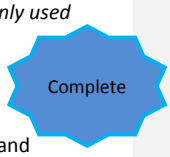
Action Step 4 – Development of webpage with key messaging on water quality, nonpoint source water pollution fundamentals and promotion of the commonly used BMP's.



Completion Date: 2014

- ISU participated in CleanWaterIowa.org website by preparing materials for website on BMPs.
- ISU hosted the Iowa Nutrient Reduction Strategy information and the Iowa Nutrient center projects and progress reports at www.nutrientstrategy.iastate.edu

Action Step 5 – Utilize existing and initiate youth-related curriculum for schools and other youth programs (i.e. Scouts, 4-H, FFA, etc.) focusing on water quality issues reinforcing the commonly used identified BMPs).



Completion Date: 2014

- ISU – Led the Aquatic Robotics Team Pilot (4-H) for Iowa State University Extension and Outreach Regions 6, 12, and 17. http://www.extension.iastate.edu/harrison/sites/www.extension.iastate.edu/files/harrison/Aqua%20Robotics%20handoutFInal%20Version%20for%20Red%20Oak%20Meeting.pdf
- ISU - Youth specialists developed relationships with Iowa State University Extension and Outreach Water Quality Initiative, the Iowa Department of Agriculture Land and Stewardship and IOWATER, as they planned how the teams could be connected to the increased water quality focus in our communities across Iowa.
- ISU - Ten teams, comprised of 42 youth and 6 adult volunteers came together to build their SeaPerch underwater robots.
- ISU - Webinar trainings were held in early May to train adult volunteers and youth teams on watersheds and local water quality monitoring. Each team chose a local water body through guidance from local water officials in their county and spent the 2014 summer and early fall conducting monthly water quality monitoring and reporting

Goal 2: Improve technical assistance, outreach and education to facilitate NPS assessment, planning and implementation

- CDI and the SWCDs engaged teachers and youth in the Conservation Poster Contest, in which students learn about conservation topics and create visual illustrations of the newly found knowledge, and the Iowa Envirothon, the largest high school environmental competition in North America. CDI promoted and continues to promote, Water Rocks, to the SWCDs. https://sites.google.com/a/cfu.net/iowa-envirothon/

Action Steps 6 and 7 were originally scheduled for completion in 2015 or later. There is no progress to report on these action steps in 2014.

Action Step 6 – Short survey conducted to measure recognition of various components from the campaign.

Action Step 7 – Final survey replicating the initial survey to measure success of the campaign.

Goal 2: Improve technical assistance, outreach and education to facilitate NPS assessment, planning and implementation

Objective 2.6 – Develop and implement conservation plans to adequately preserve soil productivity and to protect water quality for targeted priority areas.

Lead Agencies: NRCS, DSC

Action Step 1 – Make the NRCS conservation planning modules in Ag Learn available to the public.

Behind schedule

Completion Date: 2013

EPA: This says completed, but the description makes it look like it isn't currently and may never be completed as it was originally stated.
DNR: Not completed. We will continue discussions with NRCS in FY15 as to whether the conservation planning modules will be or can be made publicly available.

NRCS Conservation Planning modules in AgLearn are not currently available to the public, due to NRCS information technology (IT) security clearance restrictions that have prevented public access to the modules.. Please note that only 10 of 77 conservation planning-related classes are offered online; most are instructor-led. Right now there is not a clear path to making these classes available to the public. However, the following topics are covered in training offered online by the NRCS outside of AgLearn, throught the Iowa NRCS webpage: http://www.nrcs.usda.gov/wps/portal/nrcs/site/ia/home/:

- Primer on NRCS Environmental Compliance
- Documenting the Environmental Evaluation on the NRCS CPA-52 Environmental Evaluation Worksheet
- Environmental Evaluation Series: Planning for Natural Areas, Scenic Beauty, and Wild and Scenic Rivers Special Environmental Concerns
- Environmental Evaluation Series: Planning for Endangered Species/Migratory Birds/Bald and Golden Eagles Special Environmental Concerns
- Environmental Evaluation Series: Planning for Floodplain and Riparian Area Special Environmental Concerns
- Environmental Evaluation Series: Planning for Prime and Unique Farmland and Invasive Species Special Environmental Concerns
- Environmental Evaluation Series: Planning for Wetlands and Clean Water Act Special Environmental Concerns

There are also links to information resources, materials and forms on these topics:

- Nine-Step Conservation Planning Process
- Iowa Field Office Technical Job Sheets for Iowa Conservation Planning
- Phosphorus Index
- National Environmental Policy Act (NEPA) Compliance
- Nutrient Management

Goal 2: Improve technical assistance, outreach and education to facilitate NPS assessment, planning and implementation

- Pest Management
- Rapid Watershed Assessments
- Stream Visual Assessment Protocol Version Technical Service Providers (TSP)
- Treating Nitrates
- Watershed Project Planning Protocol

Action Step 2 – Meet with the targeted groups able to provide conservation planning assistance (e.g. "helpers") to targeted audience. State-level completed by State Office staff; Local level completed by local staff.

Behind schedule

Completion Date: 2014

EPA: Is the description missing for action steps 2-4? It was not initiated last year and nothing is written, yet it says completed in 2014?
DNR: Not completed.

Action Step 3 – Meet with the Iowa Agribusiness Association Board of Directors and sell them on the idea that having their staff at the field operations level (e.g. individual cooperatives, etc.) being trained and preparing conservation plans for their landowner customers will sustain their business—sustainable farms, environmental awareness, community goodwill.

Behind schedule

Completion Date: 2014

Action Step 4 – Make use of economic models to demonstrate how conservation pays, and therefore, conservation planning is a necessary first step to implement conservation practices in an efficient and effective manner.

Behind schedule

Completion Date: 2014

Action Step 5 – Review and consider ways to facilitate, incentivize participants who use state cost-share and other incentive-type programs to prepare a comprehensive conservation plan.

Behind schedule

Completion Date: This is an ongoing goal

EPA: Is this ongoing? For the purposes of the plan, it looks like it is either behind schedule completed. They considered it and decided not to move forward.
DNR: Behind schedule.

- NRCS leadership discussed the use of program ranking points tied to completion of a conservation plan. This will not be implemented in FY2015; focus instead will be placed on building the conservation planning skills of NRCS and partner employees. Tying ranking points to completed conservation plans will be revisited in future years.

Behind schedule

Goal 2: Improve technical assistance, outreach and education to facilitate NPS assessment, planning and implementation

Action Step 6 – Expand training opportunities for helpers.

Completion Date: This is an ongoing goal

- Partner employees and members of the public were invited to Soil Health and other training events held during FY 2014. Cooperative educational opportunities will also be available in 2015 through agreements with Iowa State University, Practical Framers of Iowa, the University of Northern Iowa and others. NRCS continues to provide conservation planning training to Technical Service Providers (TSPs) as part of the TSP certification process.

Goal 3: Science-Based Performance Measures

Objective 3.1 – Encourage greater public participation in the monitoring and evaluation of water quality best management practices.

Lead Agency: DNR

Action Step 1 – Complete migration of STORET data to EQuIS to facilitate increased accessibility and usability of DNR data.

Completion Date: 2014

- DNR has completed the transfer of water quality data from the older database (AWQM) to the new EQuIS database. Through this process, issues were identified for a small subset of data that is being investigated before it is allowed to be uploaded into EQuIS. There is also a standard process for establishing the data quality prior to uploading to EQuIS.

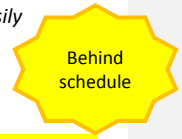
Action Step 2 – Develop standardized protocols for data sharing (agencies, volunteers, NGOs, private entities).

Completion Date: 2013

EPA: So this is not completed, correct?
If DNR has come up with a standardized process, shouldn't other agencies be made aware of and share in the process so all can use the same protocols?
DNR: Completed. To clarify, data are uploaded to the Water Quality Exchange (WQX), and other agencies can access the data currently. Other agencies are aware of this standardized process.

- DNR has completed part of this task with a standardized process to retrieve data from the State Hygienic Laboratory web based sample reporting portal (OpenElis). Work is nearing completion on the volunteer database that endured an outside digital attack. A new security protocol was implemented and testing is currently underway. Further work needs to be completed to verify data quality of non-Department data.

Action Step 3 – Develop on-line customized reports and/or graphical output of data using easily understood language for HUC12 or smaller watersheds.



Completion Date: 2013

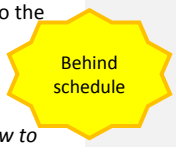
EPA: Looks like this isn't completed yet. This will be really interesting when it is finished. The action step says HUC 12 or smaller, but the description says regional. Does that mean the original action step has changed or will not be pursued soon?

DNR: Not completed. To clarify, this action has changed due to changes in GIS processes, and this action will be discussed in FFY15.

Goal 3: Science-Based Performance Measures

- DNR has started a process to generate regional watershed assessments reports based on 8 topic areas, automatically updated based on current database entries. Work is completed on 2 of the topic areas and work continues as staff time allows.

Action Steps 4-6 had an original anticipated completion date of 2014. DNR has not had the staffing resources to start this project. In the past the DNR has assisted with the development of monitoring plans and QAPPs on an individual basis. That work continued in the last year and will continue into the foreseeable future. These action steps will be revisited in the coming year as we evaluate staffing resources.



Action Step 4 – Develop an IOWATER training module that trains volunteers/citizens/others on how to develop water quality monitoring plans and quality assurance project plans.

Action Step 5 – Develop IOWATER or other training module on the use of hand-held monitoring equipment including quality assurance procedures for use of the equipment (calibration, etc.)

Action Step 6 – Develop training on the interpretation and analysis of monitoring data for citizens/volunteers/others.

Goal 3: Science-Based Performance Measures

Objective 3.2 – Develop local natural resource goals with targeted solutions to meet watershed needs.

Lead Agencies: DNR, DSC

Action Step 1 – Generate basic state-wide watershed data at the HUC 12 scale.

Completion Date: 2014

- Basic state-wide information at the HUC 12 scale is available to the public through the web-based "Watershed Atlas" hosted on the Iowa Department of Natural Resources website: http://www.iowadnr.gov/Environment/GeologyMapping/MappingGIS.aspx. Information available includes but is not limited to: HUC 12 watershed boundaries state-wide; water monitoring sites located in the watershed; location of streams and other water bodies along with showing the location of any impaired waters. We will be working to make additional HUC 12 scale watershed information available in the future.

Action Step 2 – Utilize existing tools for the purpose of providing HUC 12 watershed scale information which is easily understood and readily available to local agencies and groups.

Completion Date: 2014

- Completed - Groups or individuals may directly access basic HUC 12 information by utilizing the web-based Watershed Atlas described in Step #1. In addition, groups and individuals may request additional assistance in gathering information by contacting the local Natural Resources Conservation Service/Soil and Water Conservation District field office or by contacting the Iowa Department of Natural Resources or the Iowa Department of Agriculture and Land Stewardship directly. All these organizations work cooperatively to provide requested data and support through the use of GIS mapping tools and through local "in the field" support provided by the field office staff or the Regional Basin Coordinators. The Regional Basin Coordinators provide individual watershed assessment assistance to local groups interested in more detailed information about current watershed conditions. Additional tools will be added to assist with this information gathering process as they are required and they become available.

Action Step 3 – Provide local groups with necessary assessment tools to assist in the information gathering process.

Completion Date: This is an ongoing goal

- Completed - Local groups may request assistance with watershed assessment activities by contacting the local Natural Resources Conservation Service/Soil and Water Conservation District field office or by contacting the Iowa Department of Natural Resources or the Iowa Department of Agriculture and Land Stewardship directly. Once contact has been made, the

Goal 3: Science-Based Performance Measures

Regional Basin Coordinators provide guidance to the group during the assessment process. Assessment tools made available to the group include the use of a Tablet Computer and a RASCAL Unit for the purpose of field-level data collection and compilation. The field data collected is used in conjunction with GIS to produce watershed scale maps which highlight the priority areas within the watershed based on resources concerns and the current field-level assessment data collected. The assessment data may also be used to provide more farm and/or field specific information through the use of the Pollutant Reduction Calculator https://programs.iowadnr.gov/tmdl/PollutantCalculator. The Calculator uses the data to provide information on soil loss per acre as well as sediment delivery, phosphorus delivery, and nitrogen delivery from a field location to the water body that is of concern. The calculator also contains a mapping interface which records the locations of proposed or installed BMPs. Additionally, it can provide data relative to gallons of storm water treated in more urban settings. The Calculator establishes base-line values for an area and then can be used to show reductions in pollutants from this same area based on different bmps that can be installed to address the concern. This allows the local group to determine the best options available based on the bmp installed vs pollutant reduction associated with the practice. Currently, all local groups that request assistance in watershed assessment activities receive guidance provided by the Regional Basin Coordinators and utilize the tools described above.

Action Steps 4-7 are anticipated to be completed in 2015 (AS-4) and 2016 (AS-5 -7). There is no progress to report on those action steps from 2014.

Action Step 4 – Work with all interested local groups to develop a matrix of local resource concerns which can be utilized in the process of identifying priority watersheds.

Action Step 5 – Follow-up with any local partners that may not have participated in the prioritization process to allow for their input.

Action Step 6 – Identify desired end results and utilize this information to set watershed goals and determine practices needed to achieve desired results.

Action Step 7 – Utilize the local Soil and Water Soil and Water Conservation District to lead the process of recruiting members and organizing the Watershed Group.

Goal 3: Science-Based Performance Measures

Objective 3.3 – Utilize long-term research projects, including monitoring, funding, and alternative management practices to confirm post-project results of demonstration projects.

Lead Agency: ISU

Completion Date: All of the action steps are an ongoing goal. Iowa State University reported on the progress of this goal in 2014 below.

EPA: Looks like action steps 1 and 2 were completed, but 3-5 have not been started yet. This should clearly be stated if accurate.
DNR: Steps 1 and 2 have been completed, and steps 3 to 5 have been started and are ongoing.

Action Step 1 – Inventory long-term studies in Iowa.

Action Step 2 – Contact project leaders and identify needs (Funding, support, etc.).

Action Step 3 – Seek funds, support as needed.

Action Step 4 – Request periodic reports.

Action Step 5 – Publish results.

2014 Progress Report:

ISU researchers who lead long-term research plot work were polled and the following is a summary of their needs. The needs are separated into several main categories.

1) Funding
2) Labor and management
3) Equipment

Note: The following are quotes or paraphrases of the researcher's comments.

Introduction

Long-term nutrient management trials are very important to complement short-term trials or on-farm research. They allow for badly needed evaluation of long-term impacts of nutrient management on soil properties, crop yields, water quality, and the sustainability of cropping systems.

Funding Needs

- It is almost impossible to get extramural funding for long-term trials. Sometimes we can combine long-term objectives with temporary interest on "hot topics" to obtain funding for a year or two, but there are no public or private long-term sources, even to fill funding gaps that

occur most of the time.

- A low level of funding to at least maintain crop and soil management, treatment application, crop yield harvest, and essential soil sample collection would go a long way at helping maintain this important research resource, which is not available elsewhere. Funding for additional plant-tissue and (and for some long-term trials) water quality sample collection and analysis also would be desirable as a next step if possible.
- The other issue is the funding to do the work. The college is very generous in helping with securing some funds, but I do not know how long that will last and even with such small amount.
- I tried many different venues, but there is no support for tillage work. Meanwhile, tillage issue is one of the major problems in water quality. It may reach a point that I have to make a decision of how long I can keep these studies.
- Funding for study maintenance (including research farm funding).

Labor and Management Needs

- Agronomic plot management including collection of grain samples and grain yields.
- Maintenance of water sampling equipment and collection of water samples for documenting water quantity and quality impacts of various management practices.
- Help to do timely soil sampling across 7 research farms where a significant amount of sampling is needed. I do not know how much the farm crew can help giving their busy schedule and workload.
- Grain combining.
- Treatment applications (fertilizer, tillage, starter, etc.).
- Plot maintenance (staking, alleyways, tillage, planting, pest control, blanket fertilizer applications, data reporting, field operations tracking and reporting).
- Assistance with plot soil sampling per study protocols.
- Assistance with plant/grain sampling per study protocols.
- Water quality sampling.
- Greenhouse gas sampling.
- Many of these things are extremely helpful as they save travel costs and extensive research personnel road time (which can be much more efficient for research project crews and research farm crews).

Equipment Needs

- The long-term experiment would benefit from 1) a bigger (wider) mower-conditioner, 2) a new (functional) baler, and 3) a drill suitable for no-till planting of small grains would also be worthwhile. Note: a baler has been acquired.
- A wider mower-conditioner would allow fewer trips over the hay plots, allowing an increase in yields. A new baler would allow us to harvest hay efficiently and get more accurate measurements of hay yield. A no-till drill for small grains would allow us to cover crop more effectively after high residue crops like corn.

Goal 3: Science-Based Performance Measures

- Associated required equipment for these activities.

Goal 3: Science-Based Performance Measures

Objective 3.4 – Place greater focus on up-scaling small-plot research to watershed scale.

Lead Agency: ISU

Action Step 1 – Use plot research to calibrate and/or parameterize watershed shed level models that address management impacts on water quality.

Completion Date: 2016

- ISU – Funded research project under Iowa Nutrient Research Center to scale-up plot work to watershed scale. Initiated in 2014. In the past 12 months more than 30 presentations have been delivered to agribusiness professionals and farmers on practices that can be used to reduce nutrient movement to downstream water bodies – this has reached greater than 2500 stakeholders. Plot level research is being shared with watershed models to improve predictive capacity. This includes supplying field research data on the impacts of land management practices on nitrate-N losses in subsurface drainage.
- ISU - Funded research under the Iowa Nutrient Research Center on modeling watersheds, installing and monitoring practices on a field scale, and reporting results to producers.

Action Step 2 – Engage producers to increase adoption of practices showing promise for improving water quality.

Completion Date: 2017

EPA: Is this still from ISU? Can you clarify who is speaking and what they are referring to? What teams are these?
DNR: ISU is reporting here, as ISU is the lead agency for Objective 3.4, and they are referring to the ISU Extension Ag and Natural Resources team, which leads efforts on research and outreach to farmers in Iowa.

- Worked with farmers in priority watersheds to implement BMPs and measure water impact.
- Ag and Natural Resources Water Team formed and participated in professional development on how to engage farmers and encourage adoption of BMPs.

Goal 3: Science-Based Performance Measures

Objective 3.5 – Establish uniform practices and protocols for monitoring that can be applied to watershed needs.

Lead Agency: DNR

Action Step 1 – Compile current practices and protocols for monitoring in Iowa and identify limitations or barriers to their use.

Behind schedule

Completion Date: 2014

EPA: Looks like this has not been completed. There is no mention of the limitations or barriers to uniform practices across the state.
DNR: Not completed. Compiling uniform practices and protocols for monitoring applied to watershed needs is limited by lack of adequate funding needed for appropriate monitoring, lack of affordable equipment, and by the challenges of providing properly training for watershed project staff to carry out monitoring within watersheds. DNR intends to address some of these limitations by developing a template to assist in planning watershed monitoring for NPS projects in Iowa.

- Standard Operating Practices were developed at the project level for the ambient monitoring programs. Work will continue as staff time and other program requirements allow.

Action Step 2 – Identify emerging technologies that can be used.

Complete

Completion Date: 2014

EPA: So emerging technologies were identified? Would you please share some here?

1. DNR: Emerging technologies for monitoring include: Real-time in-situ sensors (nitrate, ammonia, phosphate).
2. Phone and tablet apps for data uploading and retrieval.
3. Quantitative PCR (polymerase chain reaction) for indicator bacteria monitoring
4. Methods for determination of viruses in water
5. Remote sensing for Harmful Algal Bloom detection

- Staff attended the National Monitoring meeting to hear about the most promising technologies being developed. This information was shared with appropriate staff as it became available.

Action Step 3 – Develop precipitation and flow monitoring protocols for implementation in the watershed.

Complete

Completion Date: 2014

- DNR developed and used a variety of precipitation and flow monitoring protocols with watershed groups including pressure transducers, IIHR bridge sensors, flow meters, IOWATER flow techniques, etc.

Goal 3: Science-Based Performance Measures

Action Steps 4 through 6 had an originally scheduled completion date of 2015 or later. There is no progress to report on these actions in 2014.

Action Step 4 – Develop protocols for gathering, managing, and documenting landowner inputs for a watershed. Establish protocols to ensure privacy for the information collected. Identify current methods in Iowa for tracking inputs to a watershed and limitations or barriers to those methods. Identify methods that other states use for tracking watershed inputs and evaluate their applicability for watersheds in Iowa.

Action Step 5 – Establish post project monitoring schemes to evaluate long-term success of improved water quality in a watershed.

Action Step 6 – Survey cooperators/producers pre- and post-watershed project to determine if they internalize water quality into their decision making process. Survey to determine if their awareness and attitudes are changing and if behaviors are being adopted within the watershed.

Goal 3: Science-Based Performance Measures

Objective 3.6 – Adopt system-based implementation and monitoring strategies versus practice – based approaches.

Lead Agencies: DNR, DSC

Action Step 1 – Encourage conservation agencies to prioritize watersheds and resource concerns, similar to an MRBI approach.

Complete

Completion Date: 2014

- DNR worked with NRCS, IDALS, ISA, and others to prioritize the 9 HUC8 watersheds for Water Quality Initiative funding.
- DNR prioritized 319 watershed funding in 2014 to watersheds with approved 9-element plans.
- DNR also recommended to the NRCS State Technical Committee that NRCS prioritize NWQI funding in 2014 to the same priority watersheds as in 2013: Black Hawk Lake, Badger Creek Lake, and Lost Branch (Rathbun), to focus water quality improvement efforts. The State Technical Committee recommended and NRCS adopted the recommendation.

Action Step 2 – Develop and implement ranking criteria to prioritize resources to projects which target practice placement within a system-based strategy for water quality improvement. Projects which adopt the "avoid, treat, and trap" approach will be given higher priority.

Complete

Completion Date: 2014

EPA: The STC establishing ranking criteria does not target practice placement within a system-based strategy like this action step states, the way that watershed planning does, right? How does this apply?
DNR: It applies in that through the STC's decisions to direct extra EQIP funding to NWQI watersheds, for example, it directs extra funding to implement targeted practices within watersheds which already have 9-element plans with targeted practice placement. Also, establishing ranking criteria based on water quality benefits, rather than just soil conservation alone, improves water quality faster.

- NRCS and the State Technical Committee establish ranking criteria for EQIP and other NRCS financial assistance program to target practice placement for water quality improvement. Section 319-funded watershed projects establish criteria to target practice placement in priority areas identified in their watershed management plans.
- DNR prioritized 319 funding in 2014 to projects which targeted BMPs to abate the specific pollutant causing a water quality impairment. It also prioritized 319 funding to projects which had identified landowners in critical areas willing to implement BMPs.

Action Step 3 – Increase number of trained consultants to work with producers to implement conservation systems. Staff should develop relationships with producers and follow-up to evaluate actual outcomes and adapt accordingly.

On schedule

Goal 3: Science-Based Performance Measures

Completion Date: This is an ongoing goal

EPA: Did this increase the number of trained consultants?
DNR: We don't have this information yet, but will check with NRCS on this in FY15, as NRCS in Iowa is re-focusing on conservation planning, rather than just individual practice implementation. Trained consultants help producers implement components of farm conservation plans.

- DNR teamed up the ISU prairie STRIPs team in 2014 and the DNR Wildlife Bureau to implement a prairie STRIPs on DNR Wildlife land through the Badger Creek Lake Watershed Project, using DNR 319 funding, and to identify private landowners in that watershed and other watersheds willing to implement STRIPS on their land, with 319 financial assistance.

Action Steps 4 and 5 had an originally scheduled completion date of 2015 or later.

Action Step 4 – Work with Iowa State, NRCS, SWCD, IDALS, private agronomists, and neighboring states to implement a consistent, comprehensive, and organized set of management recommendations to cover a broad set of agricultural systems, including but not limited to nutrients.

EPA: What about the part that mentions neighboring states? Will that happen in 2015 or is it not planned now and this is completed without that?
DNR: ISU and the University of Iowa worked with the University of Illinois on developing a nutrient research center: http://www.nutrientstrategy.iastate.edu/center
ISU and USDA have been working with nine universities in other states on a sustainable corn project; http://sustainablecorn.org/
IDALS, NRCS, ISU, and DNR, and CDI have been working with the Midwest Cover Crop Council, which includes ten Midwestern states, to promote research and demonstration of cover crops. http://www.mccc.msu.edu/

- The Iowa Nutrient Reduction Strategy (NRS), released in 2013 by IDALS, DNR, and ISU, included a set of management practices and recommendations for reducing nutrient loading to Iowa waters. The above agencies provided outreach to agronomists and producers in 2014 on the NRS. For more information: http://www.nutrientstrategy.iastate.edu/
- DNR worked with NRCS in 2014 to help promote consistent messaging on nutrient management by publicizing the new Iowa Nutrient Management (590) standard to watershed projects and through the quarterly watershed newsletter.

Action Step 5 – Develop and implement monitoring strategies at various scales within watershed project areas. For example, field level, tributary and main stream or lake. Monitoring should include flow monitoring to pollutant load transport. Monitoring should also be set in such a way to capture event and base flow conditions.

Goal 3: Science-Based Performance Measures

- For Section 319 watershed projects, water monitoring strategies were revised in 2014 with the assistance of the DNR Watershed Monitoring and Assessment Section to monitor pollutants directly related to the impairment of the waterbody (lake or stream) to be improved and, where appropriate, to incorporate flow monitoring and/or subwatershed monitoring. Monitoring strategies for the 319 watershed projects included monitoring at the tributary level, and main stem, and lake, depending upon the the level of monitoring considered practical to detect water quality improvements. Monitoring at the field level has been deemed impractical for 319 watershed projects, due to high labor and cost requirements. Field level monitoring is considered more practical by university researchers, or by special NRCS projects, or by private associations and organizations, as this type of monitoring fits better as part of research projects than as part of watershed monitoring. Monitoring results from 2014 will be shared with watershed projects at their annual meetings in early 2015.
- Also, DNR in 2014 set up a 5-year, paired watershed monitoring study through ISU in the Black Hawk Lake watershed in 2014 to test the effectiveness of NWQI funding to improve water quality.

Goal 4: Funding

Objective 4.1 – Prioritize existing public programs that support science-based measures identified in Objective 3.2.

Lead Agencies: DNR, NRCS, ISU, DSC, CDI

Action Step 1 – Determine priorities based on stakeholder needs: a)Survey stakeholders to identify current needs and priorities; b) Survey stakeholders to identify currently available funding sources. Determine if available funding is being used; c) Develop a plan that identifies areas for additional funding, and provides an opportunity for stakeholders to promote

Complete

Completion Date: 2014

- The WPAC provides an important function for the State of Iowa and relative to the state's Nonpoint Source Management Plan. In addition to serving as a central clearing house for reporting, it is a meeting place for collaborative activities such as those described in this objective. The WPAC develops an annual report to the legislature. The 2013 report was delivered in January of 2014 and can be found here: http://www.iowaagriculture.gov/WPAC/pdf/reports/WPACReporttoLegislatureJan2014.pdf?amp;tabid=775. The 2014 report will be available in early 2015 and will be available here: http://www.iowaagriculture.gov/WPACArchives.asp
  EPA: Is this response in the right place? It doesn't mention the survey or funding types at all. In 2013 the Iowa Farm and Rural Life Poll was planned to be used to answer these questions. What happened with that?
  DNR: The Iowa Nutrient Reduction Strategy (NRS) has become the primary science-based document used to determine funding priorities in Iowa, as the WPAC determined priority watersheds for the Water Quality Initiative to begin implementing practices based on the NRS. The Farm and Rural Life Poll has added specific survey questions to gauge farmer awareness and implementation of the NRS: http://www.extension.iastate.edu/article/farm-poll-room-improvement-nutrient-management-strategies

Action Step 2 – Evaluation of existing public programs: a) Assess existing public programs to see if the correct programs and needs are being met, and the priorities are being addressed; b) Identify service and / or performance gaps; c) Identify potential overlapping services between public entities (to avoid duplication of services).

Complete

Completion Date: 2014

EPA: So, is this considered completed? The 2013 report stated that "Agency partners will discuss potential of overlapping services in 2014. What happened to that?

DNR: This was completed as reported. However, existing public programs undergo ongoing scrutiny, as legislators and funding agencies review whether there is sufficient demand for the programs created, question why unspent funds don't get spend faster, and question program

results. DNR and partners re-created a list of watershed funding programs in 2014 to help identify current programs, explain the purposes of the programs, and the practices funded through the programs.

- Existing public programs were reviewed as part of the NPSMP update and development of the Iowa Nutrient Reduction Strategy. The Water Quality Initiative was developed in 2013 with funding from the Iowa Legislature to provide additional nonpoint source funding for nutrient reduction practices, to fill a gap in financial assistance for nutrient reduction practices. Project funds were awarded in 2014 for the Water Quality Initiative. http://www.cleanwateriowa.org/demonstration-projects.aspx
-

Goal 4: Funding

Objective 4.2 – Improve interaction among private sector groups to invest in NPS issues and solutions

Lead Agencies: DSC, DNR

EPA: DSC is a co-lead but they didn't submit a response to this?

Complete

DNR: DSC, like DNR, has worked to improve interaction with private sector groups, especially farm commodity groups like the Iowa Soybean Association, Iowa Corn Growers Association, Iowa Pork Producers, to fund and support watershed projects in Iowa, and—in the case of the Soybean Association—conduct extensive water monitoring. For more information: http://www.iasoybeans.com/programs/environmental-programs-services

In addition, NRCS and CDI have worked with the private sector to enhance conservation, such as working with Hagie Corporation to develop "high boy" cover crop seeders to seed cover crops into standing corn. Although we listed this as "completed", this is more accurately an ongoing objective.

Completion Dates for Action Steps 1-3: 2013

Action Step 1 – Identify relevant NGO's in Iowa that deal with NPS issues and have each NGO identify how their work impacts NPS issues.

- DNR through its watershed projects and other meetings in 2014 met with the Iowa Soybean Association, the Nature Conservancy, Practical Farmers of Iowa, and others to identify how its work impacts NPS issues, especially in the Boone watershed, Upper Cedar, and through newly-formed Watershed Management Authorities.

Complete

Action Step 2 – Coordinate &/or support existing outreach efforts.

- NRCS established and filled an Assistant State Conservationist for Special Projects position. This person provides leadership for NRCS work on water resources and also conducts targeted outreach to private and NGO sector organizations to identify opportunities, plan and implement cooperative work that benefits conservation goals.
- ISU - Included numerous questions in the 2014 Iowa Farm and Rural Life Poll to better understand farmers' perspectives on the Iowa related to conservation and water quality and practice adoption (cover crops, in particular). A report that presents the data is being drafted, and will be published in late 2014 or early 2015.
  EPA: On the Iowa what? Is the report final now? Sounds interesting.
  DNR: We believe this meant to say Iowa Nutrient Reduction Strategy.

- ISU - Published a report in 2014 titled, "Iowa Farmers' Nitrogen Management Practices and Perspectives" that presented 2012 survey data on the nitrogen management practices that Iowa

farmers use. http://www.extension.iastate.edu/article/farm-poll-room-improvement-nutrient-management-strategies

- ISU - Wrote a forthcoming report titled, "Targeted Approaches for Multiple-Benefit Agriculture: Measuring Iowans' Support for a Paradigm Shift in Agri-Environmental Policy." The report presents data from a 2012 Iowa general public survey. It presents data on Iowans' perspectives on agriculture and water quality. The report will be released in late 2014 or early 2015.
- ISU - The 2015 Iowa Farm and Rural Life Poll will include water quality-related questions. http://www.soc.iastate.edu/extension/ifrlp/about.html
- DNR collaborated with private and public partners to produce a water quality success story document in 2014, made available to Iowa legislators, SWCDs, and various NPS partners. Is available on the DNR webpage: http://www.iowadnr.gov/Environment/WaterQuality/WatershedImprovement/WatershedSuccesses.aspx
- DNR collaborated with private partners in 2014 to produce a quarterly watershed newsletter, sent to SWCS, NRCS, and available on the DNR webpage: http://www.iowadnr.gov/Environment/WaterQuality/WatershedImprovement/WatershedNews.aspx
- DNR partnered with PFI to introduce more cover crops on DNR Wildlife land and involve DNR Wildlife biologists in cover crops. For more information, see the DNR watershed newsletter: http://www.iowadnr.gov/Environment/WaterQuality/WatershedImprovement/WatershedNews.aspx

Action Step 3 – Inventory available private sector funding and existing barriers that may exist for funding.

- DNR in 2014 required 319 watershed projects to identify private match sources of funding.
- DNR in 2014 identified landowner contributions in its 319 watershed project budgets to track private landowner funding of BMPs

EPA: In your 2013 report you said you were working on a list of private sector funding. Is that still happening?

DNR: We have not worked on a statewide list of private funding, but instead have encouraged local watershed groups to identify potential private funding sources and list them in their watershed management plan. This way, specific local private sources, such as a "friends of the lake" group, a local implement dealer, a local tourism-based business, or some other local private sources are identified and approached by watershed partners for funding and support. Local barriers to funding are also identified by watershed staff and partners, as the barriers are often specific to the private source and the watershed.

Completion Dates for Action Steps 4-10 had original completion dates of 2015 or later. There is no progress to report in 2014 on action steps 4, 5, 8, and 9.

Goal 4: Funding

Action Step 4 – Encourage the WRCC/WPAC to expand current membership to host more stakeholder groups.

Action Step 5 – Target tailored messages based on identified local resource needs in coordination with WRCC & WPAC.

Action Step 6 – Develop easy to understand financial assessment tools and information to help translate benefits of conservation and clean water to profitability in the operation (return on investment, reduction of inputs, etc.).

Commented [ML1]: Don't forget to mark this on schedule, behind schedule, etc. please.

EPA: Is this in the right place? I don't see anything about financial assessment tools.

DNR: We're not aware that a universally-accepted, easy-to-understand financial assessment tool has been developed. However, ISU Extension has published information about the cost of soil erosion, which was recreated through the Iowa Learning Farms: http://www.extension.iastate.edu/ilf/sites/www.extension.iastate.edu/files/ilf/Cost_of_Eroded_Soil.pdf

Some individuals and some agencies (NRCS, ISU) have been working to develop alternate ways to assign value to the benefits of cover crops, for example, by incorporating the long term benefits of increased soil organic matter through cover crops. The Midwest Cover Crop Council is also working on this. DNR will work with its nonpoint partners on this action step. (The bullet points below were meant to be responses for Objective 4.2, Action Step 1, above)

- Several NGOs that deal with NPS issues have been identified, including Practical Farmers of Iowa, the Iowa Soybean Association, the Nature Conservancy, among many others. DNR has worked with the Iowa Soybean Association (ISA), the Nature Conservancy and other partners to conduct water monitoring, watershed planning, and to implement BMPs in the Boone River watershed to address nutrient loading in that watershed. NRCS, IDALS, ISU, CDI and DNR worked together with various NGOs in a major effort to educate farmers about cover crops and soil health in 2014.
- DNR has discussed in 2014 Iowa's NPSMP with various NGOs, including the Iowa Environmental Council (IEC), NGO members of the WRCC and WPAC, and, NGO members of the NRCS State Technical Committee.
- IDALS, DNR, NRCS, ISU, and CDI have worked with various NGOs in 2014, including the ISA, IEC, and members of the WRCC and WPAC to discuss implementation of Iowa's Nutrient Reduction Strategy.

Action Step 7 – Identify non-traditional partner groups (i.e. banks, corporations, public health, landowners).

- NRCS established and filled an Assistant State Conservationist for Special Projects position. This person provides leadership for NRCS work on water resources and also conducts targeted

outreach to private and NGO sector organizations to identify opportunities, plan and implement cooperative work that benefits conservation goals.

Action Step 8 – Identify what those entities currently invest in, what they would invest in, and/or what information is needed to make investment decisions.

Action Step 9 – Develop tailored information / messaging on the specific incentives to invest in NPS issues.

Action Step 10 – Engage the Iowa Economic Development Authority to support corporate investment.

EPA: Did you all engage the Iowa Economic Development Authority yet as planned? If not, are you still going to or is this action item not going to be pursued?

Commented [ML2]: Is this behind schedule then? Or on schedule if it wasn't planned until later anyway? Please mark as appropriate.

DNR: We have not discussed corporate investment with IEDA, but have worked with IEDA on the development of Watershed Management Authorities to improve water quality in the WMA areas, and will be discussing corporate investment with IEDA.

- A number of watershed projects secured support from local non-traditional partners, such as local businesses, landowners, and corporate sponsors, to leverage watershed project funds. For example, the Boone River watershed received support from Coca-Cola for its watershed efforts.

Goal 4: Funding

Objective 4.3 – Create new or revise existing sources to allow local groups to be more flexible in implementing and testing innovative approaches.

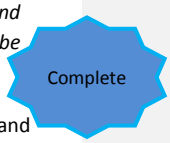
Lead Agencies: ISU, NRCS

Completion Dates: 2013

Action Step 1 – Regarding NRCS Interim Conservation Standard process: a) Inform researchers and State Technical Committee member organizations about the process to establish and utilize Interim Conservation Practice Standards; b) Encourage greater participation in the formal review and revision of existing NRCS Conservation Practice Standards to assure that the latest innovations are timely considered and implemented, upon approval.

- NRCS - The State Technical Committee has been informed about the interim practice standard development and utilization processes. Researchers have also been asked to participate in the review and revision of some standards, particularly Nutrient Management, Pest Management and standards related to Forestry. However, not all researchers have been reached so some additional work in this area is needed.

Action Step 2 – Regarding farmers, resource managers & researchers: a) Encourage researchers to attend farmer meetings where water quality is discussed so they develop relationships with progressive farmers and managers; showcase Farmer-led Watershed Projects to better inform farmers, extension and researchers of innovative strategies for addressing water quality; publicize Iowa Learning Farms activities, publications and website; b) Develop process for gathering input from farmers about innovative soil conservation and water quality practices and sharing the results with researchers; educate farmers, CCAs, industry and agency personnel on new research on innovative strategies and practices; c) Establish cross-links between NRCS, IDALS DSC, DNR, ISU and CDI websites that describe innovative water quality strategies and practices.



- ISU - Members of the Nutrient Reduction Strategy Science Team as well as other campus and field-based research and extension faculty and staff have presented at water quality focused field days, workshops, and other events and gather feedback through farmer questions and discussion. More formally, event evaluations are conducted to continually improve extension and outreach efforts. The Iowa Learning Farms has established a process for short and long-term event and program evaluation that is being implemented in other ANR Extension programs.
- ILF Approach to Evaluation: Iowa Learning Farms event evaluations occur at five stages:
    1. **Event Evaluations** for any event that ILF team members participate. These forms (completed by ILF team members) help us to understand the audience's level of engagement and help us to improve future outreach activities.
    2. **Comment Cards** filled out by all participants at an ILF-sponsored event in order to gain a better understanding of who they are and why they are there.

Goal 4: Funding

3. **Mailed Evaluation Questionnaires** to participants in any sponsored "field" event as a part of the ILF program. These questionnaires were sent within three weeks of the event. The questions focus on the clarity and accessibility of the information received and inquired whether participants planned to make any changes in their land management as a result of the event. The individual field day evaluations are in a separate report.
4. **Follow-up Evaluation Questionnaires** to participants in any sponsored "field" event. This survey was sent in January 2014 to see if the participants had made the changes they said they were going to make in earlier evaluations.
5. **Teacher Evaluations** of ILF school events (in partnership with Water Rocks! program). These questionnaires were handed to the teachers at the event with a return envelope to help see how these individuals perceived our educational programming. These evaluations are in a separate report.
    - The evaluations allow program teams to gain short term event feedback and changes in behavior that have occurred several months to one-year following attendance at an ILF or ISU Extension event. This information informs program development and improvement and allows for documentation of program impact.

Action Step 3 – Regarding Low Impact Development (LID): a) Develop new and utilize existing LID brochures, websites, and other outreach about funding programs to be distributed to the targeted audiences; b) Have agencies and LID practitioners attend trade association trade show of targeted audiences; expand LID educational programming at conferences for targeted audiences; c) Communicate LID research needs to the appropriate research community.

- DSC - No progress reported for the reporting period.

Section 319 Short- and Long- Term Goals

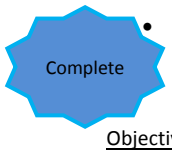
This section documents progress of short- and long term goals from the Iowa DNR's Nonpoint Source Management Program. These goals are located in Appendix A of the NPSMP and encompass Key Element #1.

Goal 1

Objective 1: Expand the basin coordinator network from 4 to 5 within 5 years, and, subject to available funding, expand the basin coordinator network from 5 to 6 within 10 years.

- There are currently 5 Basin Coordinators deployed throughout the state. Three are co-funded by DNR and IDALs and 2 are fully funded by DNR using Section 319 grant funds. Preliminary discussions began in September between DNR and IDALS to initiate exploring the prospect of subdividing the state into 6 basin areas, with 3 being served by DNR staff and 3 served by IDALS staff. The discussion also included the prospect of eliminating the overlap of basin areas within the Iowa and Cedar Basins. http://www.iowadnr.gov/Environment/WaterQuality/WatershedImprovement/ContactWatershedStaff.aspx

Objective 2: Hold quarterly basin coordinator partner meetings to strengthen agency and program collaboration.



- DNR and DSC held 4 quarterly Basin Coordinator partner meetings in FFY2014 (November 21, 2013; February 18, 2014; May 15, 2014; August 14, 2014) to strengthen agency and program collaboration.

Objective 3: Facilitate the establishment of a minimum of three Watershed Management Authorities in priority impaired watersheds within 5 years.

- Completed – Since 2012, 11 Watershed Management Authorities have been established in Iowa. Of these, two (the Turkey River Watershed Management Authority and the Squaw Creek WMA) are located in watersheds that have been identified as priority HUC-8s by the State's Water Resources Coordinating Council under the Water Quality Initiative. The remaining 9 WMAs are located in areas where water quantity and water quality are pervasive concerns that have driven local interest in organizing efforts at the watershed scale.

Objective 4: State and federal partners (including DNR Watershed Improvement Program, IDALS-DSC, and NRCS) meet with Watershed Project Coordinators at least twice per year to inform and educate them on watershed-related topics.

- DNR Watershed Improvement, IDALS-DSC, and NRCS met twice in FFY2014 with watershed project coordinators—once on March 5, 2014 for a statewide project coordinator meeting held the day after the Iowa Water Conference in Ames, and once in October of 2013 for regional project coordinator meetings, of which four were hosted and organized by DSC and DNR Basin Coordinators.

Section 319 Short- and Long- Term Goals

Objective 5: State partners meet quarterly each year with each active watershed group funded by Section 319 funds to provide individual technical/administrative assistance to watershed groups.

Complete

- State partners (DNR and DSC) met with or communicated with at least quarterly in FFY2014 with each 319-funded watershed project to provide individual and/or administrative assistance to the local project.

Objective 6: Basin coordinators collectively hold 10 outreach meetings annually with prospective watershed groups.

Complete

- DSC and DNR Basin Coordinators collectively held at least 10 outreach meetings in 2014 with prospective watershed groups. Basin Coordinator FFY2014 activity reports are attached in the GRTS database.

Objective 7: Approve or update a minimum of 10 Watershed Management Plans (EPA-approved 9-element WMPs) within 5 years (2 per year).

EPA: So this objective is behind schedule. Are there plans to update more this upcoming year?

DNR: This is slightly behind schedule, because we are not actively seeking new WMPs until more funding to implement them becomes available. Instead, we are focusing on updating existing WMPs with active 319 projects.

Commented [ML3]: Make sure you plan for the updates to plans in your application each year.

Behind schedule

- One additional 9-element plan, the Rathbun interim plan, was updated and approved in 2014. There are currently 24 approved 9-element plans in Iowa. A map of approved plans and copies of the plans are available on the DNR webpage: http://www.iowadnr.gov/Environment/WaterQuality/WatershedImprovement/WatershedPlanning/ManagementPlans.aspx

Goal 2

Objective 1: Prepare and distribute a watershed success stories document annually.

Complete

- DNR prepared its annual 2013 watershed success story, "Working for Cleaner Water", and distributed 1,500 printed copies of it to legislators, SWCDs, and other watershed partners in January of 2014. An electronic copy is available on the DNR webpage at: http://www.iowadnr.gov/Environment/WaterQuality/WatershedImprovement/WatershedSuccesses.aspx

Objective 2: Prepare and distribute a quarterly watershed newsletter.

Complete

- DNR prepared and distributed 4 electronic issues of the quarterly watershed newsletter, "Clean Water Starts With Us" in FFY2014 to 229 watershed and agency partner recipients (December, 2013, and March, June, and August of 2014), which are available on the DNR webpage: http://www.iowadnr.gov/Environment/WaterQuality/WatershedImprovement/WatershedNews.aspx

Section 319 Short- and Long- Term Goals

- DNR completed a survey of newsletter recipients in 2014, which showed that there is strong interest among readers in continuing to receive it.

Objective 3: Provide GIS mapping support to all prospective watershed groups that apply for DNR Planning Grants, IDALS-DSC Development and Planning Grants, and to existing watershed projects.

EPA: No need to list every project that had a map made. I trust your numbers.

Complete

- The DNR continued to provide GIS mapping support in FFY2014 to a myriad of watershed groups, partners, and stakeholders across the state. The DNR GIS specialist for the Watershed Improvement Section has developed over 1,000 maps for over 45 different watershed projects for programs including 319, WSPF, Watershed Management Authorities, Watershed Improvement Review Board, Total Maximum Daily Load projects, and the Water Quality Initiative (WQI).
- Section 319 Watershed Projects: Badger Creek Lake, Madison County; Big Wall Lake, Wright County; Black Hawk Lake, Sac / Carroll County; Buffalo Creek, Jones / Linn / Delaware / Buchanan County; Clear Lake, Cerro Gordo County; Duck Creek, Scott County; Lake Geode, Henry / Des Moines County; Rathbun Lake, South Central Iowa; Silver Creek, Clayton County.
- SWPF Projects: Cedar Creek, Monroe / Lucas County; Coon & Coal Creeks, Marion / Warren County; Cooper Creek, Appanoose County; Crow Creek, Jefferson County; Eldred Sherwood Lake, Hancock County; Fox River, Davis / Appanoose County; Gere Creek, Cherokee County; Klondike Creek, Lyon County; Lizard Creek, Webster / Calhoun County; Otter Creek Lake, Tama County; Oxley Creek, Polk / Dallas County; Walnut Creek, Mills / Pottawattamie County; Waubonsie Creek, Mills / Fremont County.
- Watershed Management Authorities: English River, Poweshiek et al County; Fourmile Creek, Polk / Story / Boone County; Indian Creek, Linn County; Mud, Spring, Camp Creeks, Polk / Jasper / Marion / Warren County; Turkey River, NE Iowa; Walnut Creek, Polk / Dallas County.
- Watershed Improvement Review Board: Clear Creek, Johnson County; Coon & Coal Creeks, Marion / Warren County; Fox River, Davis / Appanoose County; Gere Creek, Cherokee County; Little Bear Creek, Poweshiek County; Miller Creek, Monroe / Wapello County; Walnut Creek, Mills / Pottawattamie County.
- Total Maximum Daily Load Projects: Beaver Lake, Dallas / Guthrie County; Browns Lake, Woodbury County; Eldred Sherwood Lake, Hancock County; Lake Iowa, Iowa County; Kent Park Lake, Johnson County; Otter Creek Lake, Tama County; Rathbun Lake, SC Iowa.
- Water Quality Initiatives: Buffalo Creek, Jones / Linn / Delaware / Buchanan County; Lizard Creek, Webster / Calhoun County; Walnut Creek, Mills / Pottawattamie County.
- Additionally, the DNR has developed state-wide maps for the ongoing mussel survey, 319 status maps for projects like Watershed Management Authorities and Watershed Management Plan areas, maps to show relationship to 319 and other state program maps, the DOT road crossing signage project, and various maps associated with the Impaired Waters List.

Section 319 Short- and Long- Term Goals

Objective 4: Provide tools for conducting watershed inventories and assessments (such as, the RASCAL streambank assessment, tablet land use assessment, etc.) to all prospective watershed groups that apply for DNR Planning Grants, IDALS-DSC Watershed Development and Planning Grants, and for existing watershed groups.

The DNR has continued to provide these services to watershed projects. During the last year, the DNR has helped in developing 10 landuse assessments, 7 RASCAL assessments, 4 gully assessments, 1 streambank / shoreline survey, and two urban assessments.

Complete

- Landuse assessments for Coon & Coal Creeks in Marion & Warren Counties; Cooper Creek, Appanoose County; Eldred Sherwood Lake, Hancock County; Fourmile Creek WMA, Polk County; Gere Creek, Cherokee County; Indian Creek WMA, Linn County; Klondike Creek, Lyon County; Mud, Spring, and Camp Creek WMA, Polk / Jasper / Marion / Warren Counties; Walnut Creek, Mills / Pottawattamie County; Waubonsie Creek, Mills / Fremont County.
- RASCAL Assessments for Coon & Coal Creeks in Marion & Warren Counties; Crow Creek, Jefferson County; Indian Creek WMA, Linn County; Mud, Spring, and Camp Creek WMA, Polk / Jasper / Marion / Warren Counties; Pilot Creek, Pocahontas County; Ralston Creek, Johnson County; Walnut Creek, Mills / Pottawattamie County.
- Gully assessments for Badger Creek Lake, Madison County; Cooper Creek, Appanoose County; Fox River, Davis / Appanoose County; Gere Creek, Cherokee County.
- Streambank / Shoreline stabilization survey for Lake Miami, Monroe County.
- Urban assessment for Cooper Creek, Appanoose County; Indian Creek WMA, Linn County.
- Developed a web-based Pollutant Reduction Calculator (PRC) tool for use by 319 and other watershed projects in Iowa. The Pollutant Reduction Calculator tool is designed to quantify sediment, phosphorus, and nitrogen load reductions from BMPs installed. DNR conducted four training sessions in 2014 for project coordinators on how to use the PRC tool.

Objective 5: Conduct a statewide survey of Iowans' understanding of and attitudes about water quality and watershed improvement at year 1 and year 5 of the NPSMP.

Behind schedule

- See the update under Objective 2.5

Objective 6: Encourage the incorporation of a minimum of three water quality questions per year into the Iowa Rural Life Poll.

Complete

- DNR worked with ISU to ensure that at least three water quality questions were incorporated into the 2014 Iowa Farm and Rural Life Poll. Approximately six water quality questions are planned for the 2015 poll. The results of the 2013 results are posted on the ISU website below: http://www.soc.iastate.edu/extension/ifrlp/about.html

Objective 7: Develop a guidebook for communities to facilitate HUC-8 watershed visioning in Iowa within 5 years.

Behind schedule

- See the update under Objective 2.4

Section 319 Short- and Long- Term Goals

EPA: Is this objective not going to be pursued or are you still looking for a pilot HUC 8?

DNR: We are not actively looking for a pilot HUC-8 watershed for visioning, due to the lack of interest at the HUC-8 level so far. We will ask if there is interest through WMAs.

Objective 8: Support education and outreach to women landowners in Iowa through a minimum of 4 events per year that target women landowners in existing 319 watersheds and through statewide events.

Complete

- Women, Food and Agriculture Network (WFAN) has developed a program called Women Caring for the Land (WCL), designed to serve female non-operator landowners who are interested in learning more about conservation. The program is successful, popular, and in increasing demand among both women landowners and agency partners such as NRCS and the Iowa Department of Natural Resources. Each meeting begins at 8:30 a.m. and ends at 3:30 p.m. Lunch is provided, and during an afternoon field tour participants will travel to a nearby farm to watch a demonstration of soil testing. The tests will measure for soil structure and stability and infiltration. Women landowners learn how to assess and improve the health of their soils through practices such as cover crops, no-till and strip-till, among other conservation practices. Over half the farmland in Iowa is currently owned or co-owned by women. WFAN's program Women Caring for the Land offers a peer-to-peer, informal discussion format to allow women landowners to talk about your individual farm management goals, facilitated by women conservationists.

- **2014 Women Caring for the Land Meetings:**
  EPA: Unless you really want to include it, this level of detail on time and location of each meeting is unnecessary for EPA at least. Please just respond to the action item of at least 4 events in 319 watersheds and through statewide events. I can't tell from this list if they were in 319 projects or if they were statewide.
  DNR: There were at least 4 events this year that targeted women landowners in existing 319 watersheds and through statewide events.

  1. Friday, May 16, 2014
     Time: 8:30am-3:30pm
     Location: Wellman Banquet Hall, 525 13th Street, Wellman, Iowa

  2. Tuesday, April 15, 2014
     Time: 8:30am-3:30pm
     Location: Pizza Ranch, 211 N. Main St, Pocahontas, Iowa

  3. Monday, April 14, 2014
     Time: 8:30am-3:30pm

Location: Jefferson County Fairgrounds-Activity Building, 2602 W. Burlington, Fairfield, Iowa

4. Monday, March 31, 2014
   Time: 8:30am-3:30pm
   Location: Iowa Arboretum, 1875 Peach Avenue, Madrid, Iowa
   Watershed Project: Big Creek Lake (within 319 project area)

5. Wednesday, June 18, 2014
   Time: 8:30am-3:30pm
   Location: DeWitt Community Center, 512 10th St, DeWitt, IA

6. Tuesday, July 22, 2014
   Time: 8:30am-3:30pm
   Location: Dolliver Memorial State Park, 2757 Dolliver Park Ave., Lehigh, IA

7. Friday, August 29, 2014
   Time: 8:30am-3:30pm
   Location: Iowa State Extension and Outreach Building, 414 Main Street, Donnellson

8. Monday, October 13, 2014
   Time: 8:30am-3:30pm
   Location: Grinnell Methodist Church, 919 4th Ave. Grinnell

9. Tuesday, October 14, 2014
   Time: 8:30am-3:30pm
   Location: Wilder Business Center Room 103, NICC Campus, 1625 Hwy 150 South, Calmar
   (next to Yellow River Headwaters, 319 project area)

10. Wednesday, October 15, 2014
    Time: 8:30am-3:30pm
    Location: Buchanan ISU Extension/Heartland Acres Agrivision Center, 2600 Swan Lake Blvd., Independence

11. Thursday, October 16, 2014
    Time: 8:30am-3:30pm
    Location: Miller Park Shelterhouse, 401 Booth Street, Polk City
    Watershed Project: Big Creek Lake (within 319 project area)

12. Thursday, October 23, 2014
    Time: 8:30am-3:30pm
    Location: Dickinson County Nature Center, 2279 170th St., Okoboji (within 319 project area)

Section 319 Short- and Long- Term Goals

Objective 9: Inform and educate Iowans about water quality issues through a minimum of 3 statewide educational efforts (examples include Project AWARE, IOWATER Workshops, and the Iowa State Fair) per year.

Complete

- DNR informed Iowans about water quality issues in 2014 through the following statewide educational efforts: through the DNR activities in the DNR Building at the Iowa State Fair in August; through Project AWARE, the DNR river clean-up event held in July of 2014; through the rededication of Lake Darling, which featured two events in 2014 and statewide-run DNR newspaper articles; through the dedication of Big Creek State Park improvements in July of 2014, which featured watershed and water quality improvements; and though other statewide press releases and events.
- Also, DNR in 2014 provided 319 funding to Iowa Learning Farms and Water Rocks!, two statewide water quality educational projects led by ISU (previously reported)

Objective 10: Work with each Section 319-funded project to hold at least one project field day event annually for the duration of the project.

Complete

- Black Hawk Lake – 2 field days
- Clear Lake – None (New coordinator was hired in 2014)
- Union Grove Lake – 1 field day
- Silver Lake – 1 field day
- Iowa Great Lakes –None (Project Coordinator position was vacant for 7 months)
- Tete des morts – 1 field day
- Yellow River – 2 field days
- Silver Creek (Clayton) – 1 field day
- Silver Creek (Howard) – 1 field day
- Dry Run Creek – 1 field day
- Badger Creek Lake – 1 field day
- Big Creek Lake – 2 field days
- Duck Creek – 1 field day
- Easter Lake – 1 field day
- Lake Geode – 1 field day
- Price Creek – 2 field days
- Rathbun Lake – 3 field days

Objective 11: Develop and implement a water quality educational campaign targeted to Iowa children in grades K-12 by 2014.

Complete

- DNR in FFY2014 provided financial support for the Water Rocks! project (see Objective 2.5).

Objective 12: Develop a water quality education campaign targeted to Iowa adults within 5 years.

On schedule

Section 319 Short- and Long- Term Goals

- DNR plans to support an educational campaign based on the results of the Statewide Water Quality Survey planned for 2015 (See Objective 2.5)

Goal 3

Objective 1: Evaluate and track progress annually on the implementation of each EPA-approved Watershed Management Plan.

Complete

R in 2014 tracked progress made on the implementation of each approved Watershed Management lan with 319 funding. Plan tracking and evaluation were part of the watershed project annual review meetings held in late winter of 2014.

EPA: Do you have this evaluation and tracking listed somewhere that I can see or access?
DNR: WMP tracking is not posted on publicly accessible webpage, but could be forwarded to EPA for specific plans, upon request.

Commented [ML4]: I would love to have this information! Would it be difficult to share it for some reason? I have the GAPRs, which are helpful for each project, but no way to tell quickly and cumulatively, where the plans are in implementation.

Objective 2: Transition to developing Total Maximum Daily Loads (TMDLs) using a rotating basin approach, within 3 years.

During 2014, the Iowa DNR developed and adopted a strategy consistent with EPA HQ's national 303(d) Vision. The vision calls for developing a prioritization process and associated supporting strategies to implement those priorities. Part of the DNR Vision discusses the merits of using a rotating basin roach in development of TMDLs as a cost saving measure for monitoring efforts. The DNR has shifted DL development strategy since the development of the 2012 NPSMP to follow this approach and ntinue to do so in the future as the Vision reinforces this measure.

Will not be completed

EPA: I can't quite tell from this statement if this rotating basin approach is being pursued within 3 years. That would have to happen next year, right?
DNR: This will not be completed within the three year period.

Objective 3: Develop 4 lake TMDLs per year, or develop 20 lake TMDLs within 5 years.

- Lake TMDLs remain central in the DNR's TMDL Vision. Since 2012, the EPA has approved 14 TMDLs on Iowa lakes. The number of approved TMDLs thus far is ahead of pace. The full list of approved TMDLs since 2012 are as follows:
  - Black Hawk Lake (Algae, Turbidity), Briggs Woods Lake (Low DO, Algae), Lake Keomah (Algae, pH), Hannen Lake (Algae, pH), Casey Lake (Algae, pH), Little River Lake (Turbidity), Volga Lake (Algae, Turbidity), Otter Creek Lake (Algae) http://www.iowadnr.gov/Environment/WaterQuality/WatershedImprovement/WatershedResearchData/WaterImprovementPlans/PublicMeetingsPlans.aspx

On schedule

Objective 4: Complete TMDLs for all 2002 listed impaired waters (category 5a) by 2016.

Section 319 Short- and Long- Term Goals

Will not be completed

The national 303(d) Vision substantially changed the approach to the way a state prioritizes impaired ers. Previous unofficial EPA guidance suggested, via a loosely worded memo, that a state had 13 o develop a TMDL once it was impaired. This was effectively known as the "pace" requirement elped drive TMDL development for many states. With the adoption of a new prioritization process r the 303(d) Vision, "historical pace" was replaced with "pace within priorities."

EPA: Should this objective be changed in light of the new 303(d) vision? Right now it is difficult to track progress in this response.
DNR: It probably makes sense to change this objective. Please advise on how to do this.

Commented [ML5]: Good question! I vote we keep it as is so we don't need a formal update to the NPSMP. Then, you write what you wrote here to explain it and update that each time. The smaller details would be in your TMDL PIPs.

- Given the new Iowa prioritization process, the impaired waters from 2002 have been reprioritized under this new scheme. Backbone Lake and Bob White Lake have bacteria impairments, which are planned to be covered under a statewide beach bacteria TMDL. This project is expected for completion in 2017. Windmill Lake's Algae impairment remains a high priority and is planned for 2015-2016. Lake Manawa and Browns Lake Turbidity impairments have been reclassified as a lower priority due to their status as an oxbow lake. Oxbow lakes are essentially infant wetlands and a new analysis on wetland standards may find these lakes as unimpaired. The Iowa River bacteria impairment remains on the radar as a lower priority project to develop a basin-wide TMDL with a time of completion unknown at this point. The Chariton River, Low DO impairment will likely be addressed by the major Lake Rathbun TMDL, which holds a tentative completion date of 2016.

Objective 5: Remove 5 water quality impairments within 5 years for waters currently listed as impaired on the state Integrated Report.

On schedule

east one impairment was fully removed in 2014 for Big Wall Lake, based on improvements resulting 319-funded water quality project. A Big Wall Lake 319 success story was submitted to EPA in July 4, and was posted on the EPA 319 Success Story webpage in 2014 at:
://water.epa.gov/polwaste/nps/success319/

EPA: This doesn't need a response, but note for future presentations that here are the total numbers for R7: IA -7, NE -7, MO -14, KS -33. Sometimes the "story" on the national website includes more than one impaired segment removed.

Objective 6: Establish and conduct monitoring annually to track changes in water quality resulting from watershed improvement in Section 319-funded watersheds.

Water quality monitoring of 319-funded watershed in 2014 included:

Complete

- Black Hawk Lake – In-lake monitoring and event sampling completed at major tributaries in the watershed.
- Clear Lake – Secchi depth measurements were collected by project coordinator.

Union Grove Lake – No monitoring.
EPA: Why no monitoring? Don't we have it listed in one of the monitoring projects?

Section 319 Short- and Long- Term Goals

DNR: The water monitoring staff determined that the existing DNR ambient lake monitoring was sufficient for gauging water quality at Union Grove Lake in FY14, and that conducting additional watershed monitoring would not detect changes in water quality in the lake.

- Silver Lake – In-lake monitoring collected by Iowa State University. Tributary monitoring completed by IGL Clean Water Alliance
- Iowa Great Lakes - In-lake monitoring collected through Iowa State University. Tributary monitoring completed by IGL Clean Water Alliance, Iowa Lakeside Laboratory
- Tete des morts – Biological monitoring completed in August.
- Yellow River – Water monitoring (bacteria) completed during the 2014 recreation season.
- Silver Creek (Clayton) – Biological monitoring completed at two sites in August.
- Silver Creek (Howard) – Water monitoring (bacteria) completed during the 2014 recreation season.
- Dry Run Creek – Biological Monitoring completed at one site.
- Badger Creek Lake – On-going monitoring is conducted in tributaries and lake.
- Big Creek Lake – On-going monitoring is conducted in tributaries and lake.
- Duck Creek – This is the last year of the project and no monitoring was conducted in 2014 due to budget constraints.
- Easter Lake – On-going monitoring is conducted in tributaries and lake.
- Lake Geode – On-going monitoring is conducted in tributaries and lake.
- Price Creek – On-going monitoring is conducted in Price Creek.
- Rathbun Lake – On-going monitoring is conducted in tributaries and lake. Intensive monitoring is being conducted for TMDL purposes.

Objective 7: Provide analysis and interpretation of watershed-based water quality data annually to active Section 319-funded watershed groups to inform them and improve their understanding of progress towards reaching WMP goals.

- Water Quality summaries are developed for each active 319 project that is collecting data. Reports are provided to the 319 Project Officer for dissemination to the appropriate project staff. Meetings with watershed groups are usually arranged by the 319 staff to present information and answer questions.

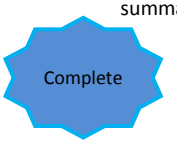
Objective 8: Provide analysis and interpretation of statewide water quality data annually to guide state and local groups.

- The ambient monitoring data is summarized and compared to the trailing 10 year data averages in a factsheet that is used by staff and posted to the DNR webpage. Additional analysis is conducted as the need arises and is posted to the DNR web page.

Objective 9: Report on modeled annual pollutant load reductions for sediment, phosphorus, and nitrogen, in Section 319 priority watersheds.

Section 319 Short- and Long- Term Goals

Load reduction information will be entered into GRTS database by February 15, 2015. The following is a summary of that data:



Section 319 Short- and Long- Term Goals

FFY2014 BMP Implementation Summary				
Practice Type	Estimated Sediment Delivery Reduction (t/y) [1]	Estimated P Reduction (lbs/yr) [2]	Estimated N Reduction (lbs/yr) [3]	Total Number of Practices
Waterways	1,735	2,570	4,841	52
Sediment Control Structures	2,134	2,824	4,268	25
Terraces	379	560	0	20
Management Practices	1,247	1,963	3,444	60
Filter/Buffer Strips	98	133	262	6
Streambank/Shoreline Stabilization	1,585	2,827	3,170	69
Urban	13	142	495	71
Total	**7,191**	**11,019**	**16,480**	**302**

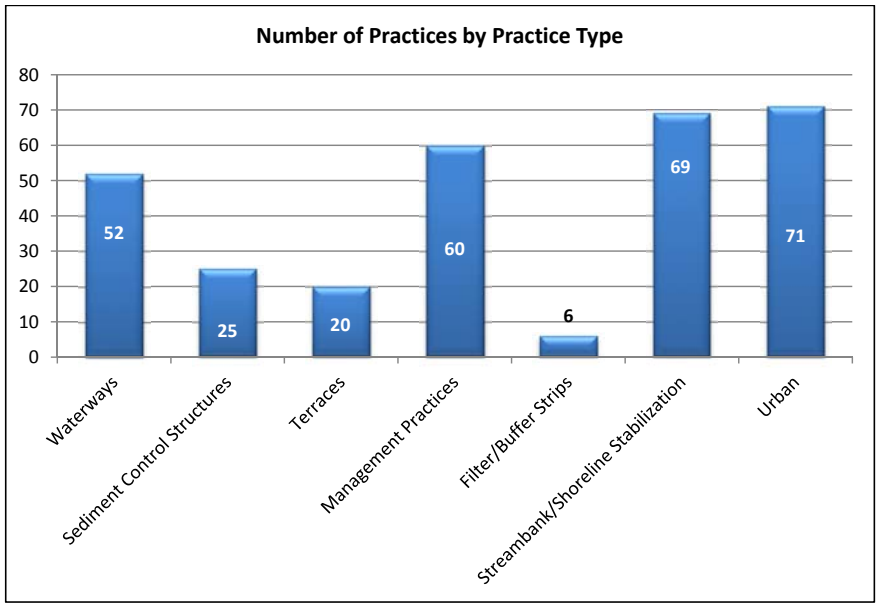
[1] Iowa Pollutant Reduction Calculator

[2] Iowa Average P concentration of 1.3 lbs per ton of sediment

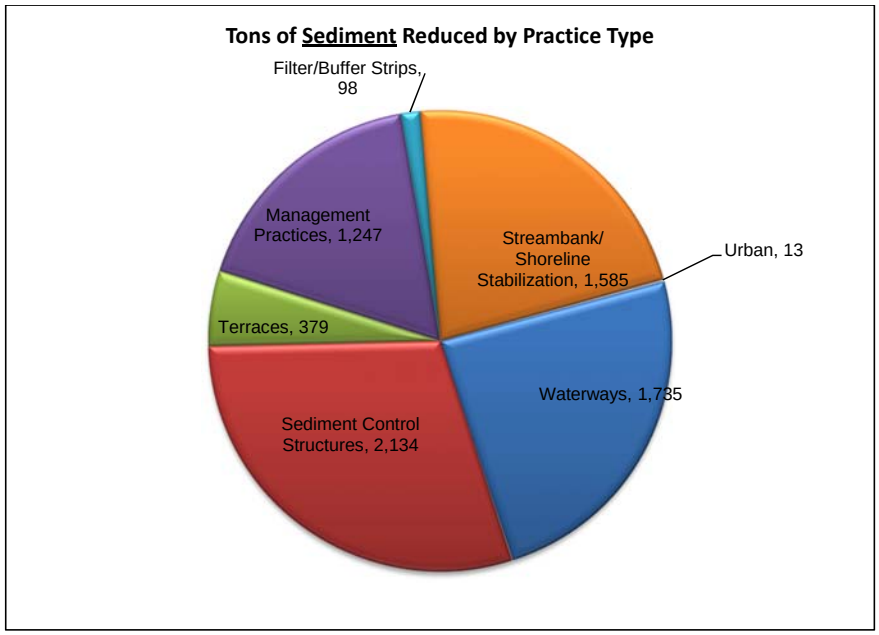
[3] Region 5 Model

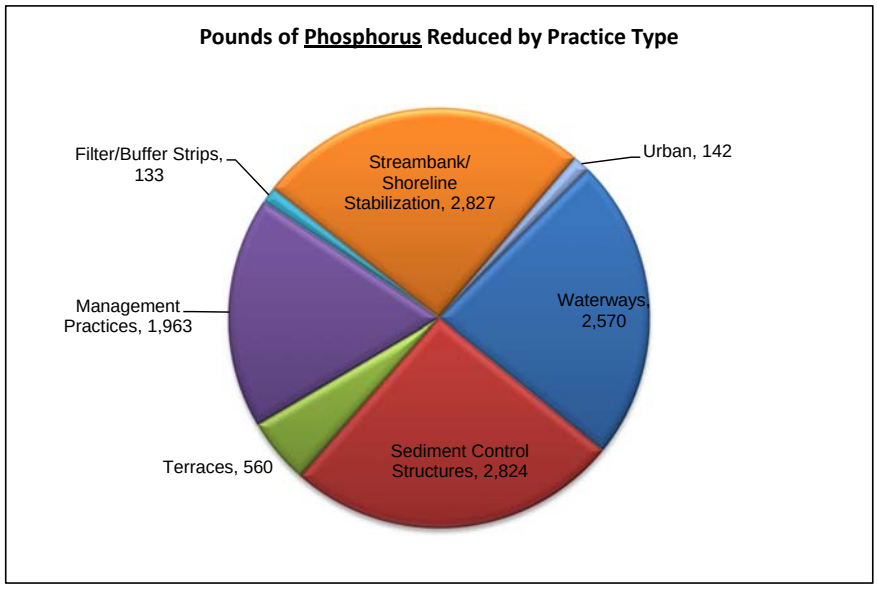
- Reduced sediment reaching waterways by an estimated 7,191 tons per year, phosphorus by an estimated 11,019 pounds per year, and nitrogen by an estimated 16,480 pounds per year.

The following is a series of graphical representations of reductions by the type of practices installed:

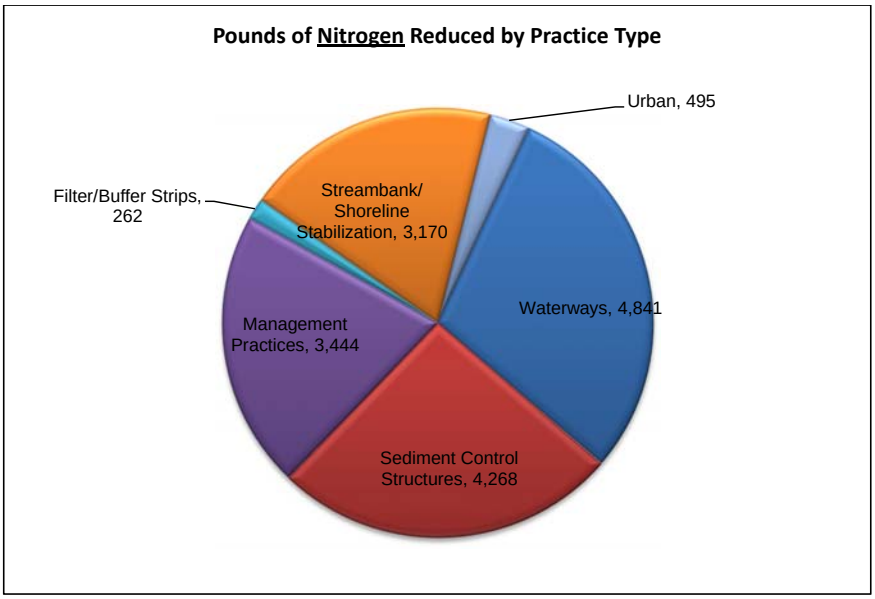


Section 319 Short- and Long- Term Goals





Section 319 Short- and Long- Term Goals



Objective 10: Develop or adopt a tool to estimate annual pollutant load reductions from urban conservation practices within Section 319 priority watersheds by 2013.

Complete

- An Urban BMP load reduction calculator has been incorporated into Iowa's web-based Pollutant Reduction Calculator. Methodologies and default chemical constituent concentration values were derived from "The Simple Method to Calculate Urban Stormwater Loads" (Schueler, 1987). Users of the calculator provide the area draining to the installed BMP, the percentage of impervious surfaces within that drainage area, the percentage of precipitation events that produce runoff, and the average annual precipitation for their locality. With these site-specific values entered, the Urban calculator estimates the reduction of Total Suspended Solids, Total Phosphorus, Total Nitrogen, and the volume of stormwater treated for 27 different Urban BMPs described in the Iowa Stormwater Manual http://www.iowadnr.gov/Environment/WaterQuality/WatershedImprovement/WatershedBasics/Stormwater/StormwaterManual.aspx .
  Schueler, T. 1987. Controlling urban runoff: a practical manual for planning and designing urban BMPs. Metropolitan Washington Council of Governments. Washington, DC

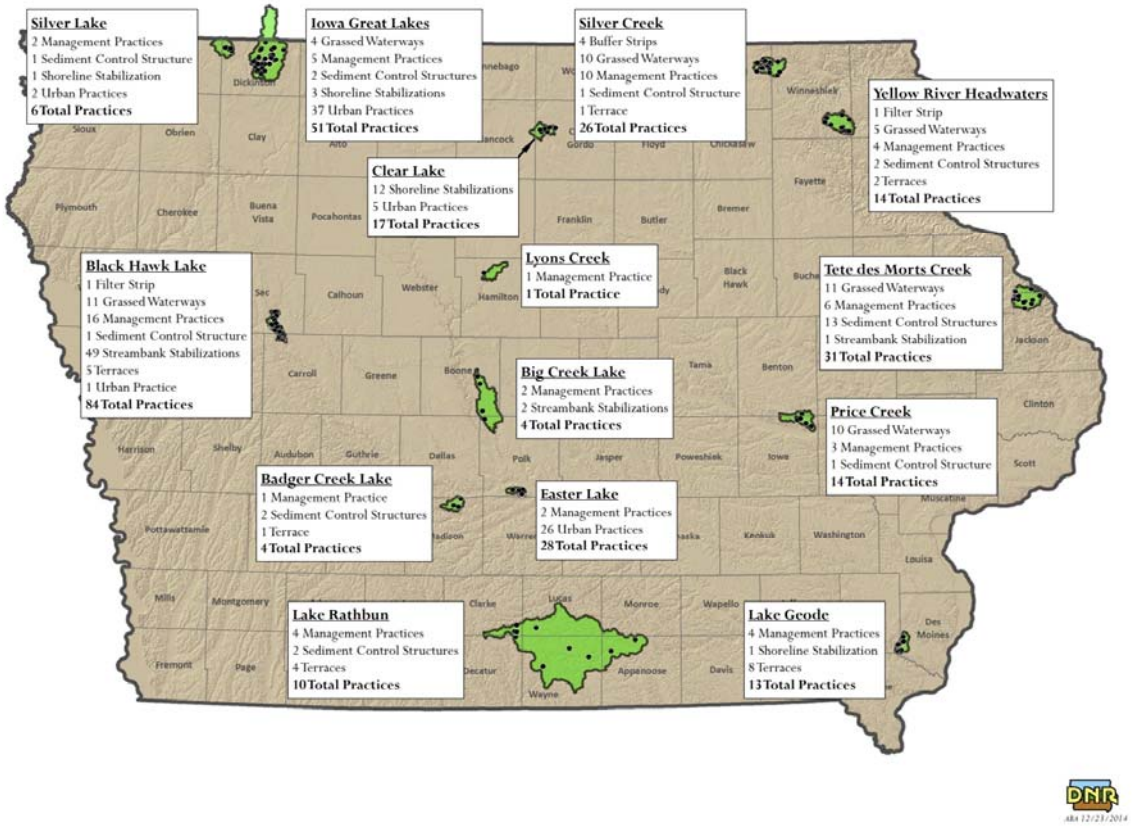
Objective 11: Digitally map all conservation practices installed in Section 319 priority watersheds by 2013.

Complete

Section 319 Short- and Long- Term Goals

EPA: I don't think the following map is what was meant by "digitally map"? Or was it? I thought it meant to map each BMP, not map the watersheds with a list of BMP categories? So is this completed then?
DNR: DNR's Pollutant Reduction Calculator collects the location of BMPs, in addition to calculating individual BMP load reductions, and is stored within a geospatial database. The map below is one example of a statewide map of BMPs in 319 watersheds, created from the geospatial database, which includes the digital location (based upon latitude and longitude) of each BMP. The statewide map below was used to show the Iowa Water Resources Coordinating Council (WRCC) the locations of 319 BMPs installed in FY14.

Section 319 Short- and Long- Term Goals



Section 319 Short- and Long- Term Goals

Goal 4

Objective 1: Target at least 50% of Section 319 funds annually to support priority locally-led impaired watershed projects within the 6 major river basins and 3 major river regions in Iowa, by 2013.

Complete

- DNR targeted 50% of FFY2014 Section 319 grant to support priority locally-led impaired watershed projects. The amount of funds allocated for watershed project implementation in 2014 totaled $1,738,000.

Objective 2: Annually promote the use of 604(b) funding for regional watershed planning.

Complete

- $76,800 of FFY14 604(b) funds were used in late 2013 to provide funding to the Turkey River WMA to support their watershed planning efforts. In 2014, $78,850 of FFY15 604(b) funds were set aside for additional WMA watershed planning efforts. These were combined with Section 319 funds to create a funding pot of $202,000 that was made available to eligible WMA's through a competitive RFP issued in August, with applications due in September.

Objective 3: Annually promote the use of clean water SRF funds statewide and within Section 319 priority watersheds as a means to increase private investments to address nonpoint source pollutants.

- Clean water SRF funds were promoted statewide in 2014 by DNR, IDALS, NRCS, and by the Iowa Finance Authority through SWCDs. These agencies also promoted the use of Clean Water SRF funds within 319 priority watersheds to supplement BMP funding in those watersheds.

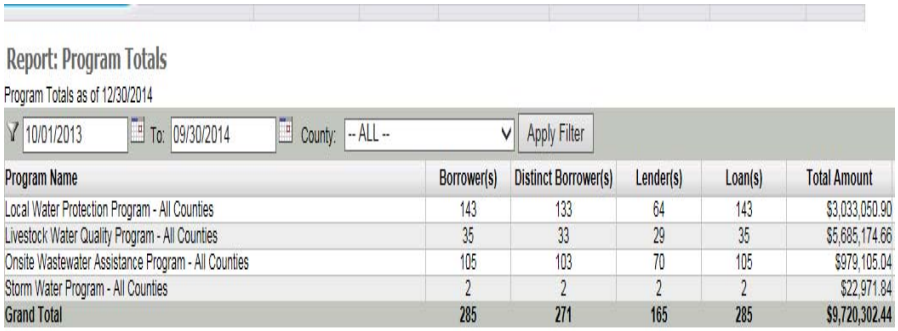
Complete

- The SRF clean water nonpoint source loan programs include the Local Water Protection Program used to fund ag land-based water quality BMPs; the Livestock Water Quality Program used to fund water quality improvements for livestock operations; the Onsite Wastewater program used to fund septic system replacement; and the Storm Water Program used for urban water quality practices. The total amount of clean water SRF nonpoint source program funds used statewide in FFY2014 was $9,720,302. FFY2014 funding by program included:

Local Water Protection Program:	$3,033,051
Livestock WQ Program:	$5,685,175
Onsite Wastewater Program:	$975,105
Storm Water Program:	$22,972
FFY2014 Total SRF Nonpoint Programs:	$9,720,302

For more information on Iowa SRF programming, see:
http://www.iowasrf.com/

Section 319 Short- and Long- Term Goals



Report: Program Totals

Program Totals as of 12/30/2014

10/01/2013 To: 09/30/2014 County: -- ALL -- Apply Filter

Program Name	Borrower(s)	Distinct Borrower(s)	Lender(s)	Loan(s)	Total Amount
Local Water Protection Program - All Counties	143	133	64	143	$3,033,050.90
Livestock Water Quality Program - All Counties	35	33	29	35	$5,685,174.66
Onsite Wastewater Assistance Program - All Counties	105	103	70	105	$979,105.04
Storm Water Program - All Counties	2	2	2	2	$22,971.84
Grand Total	**285**	**271**	**165**	**285**	**$9,720,302.44**

Objective 4: Annually promote the use of USDA funding programs such as, EQIP, CREP, MRBI, etc., within Section 319 priority watersheds as a means to increase private investments to address nonpoint source pollutants.

Complete

- Watershed projects funded by Section 319 and other funding sources promoted the use of USDA funding programs, including EQIP, CREP, NWQI, and CSP in 2014.
- NWQI:

To target water quality improvements, DNR recommended and NRCS approved that the three Iowa watersheds selected for NWQI funding in 2014, as in 2013, was a watershed with a 319-funded watershed project: Black Hawk Lake, Badger Creek Lake, Lost Branch (Rathbun Lake tributary). Lower South Fork, another Rathbun tributary, utilized NWQI funding in 2013, but not in 2014. The total amount of NWQI funding obligated in FFY2014 was: $878,000. The total NWQI funding obligated per watershed in 2014 was, as follows:

Black Hawk Lake:	$263,002
Badger Creek Lake:	$260,922
Lost Branch:	$354,588
Total 2014 NWQI	$878,512

- EQIP:

The total amount of EQIP funding obligated statewide in 2014 for water quality BMPs was $22,783,856.

- CSP:

The total amount of CSP funding obligated statewide in 2014 for water quality practices was $4,509,956.

Objective 5: Annually document and report on the amount of dollars leveraged by Section 319 funds, including public and private investments, in Section 319 priority watersheds.

- In FFY14, a total of $3,801,013 in funds were leveraged by Section 319 funds through 16 different 319-funded watershed projects, as shown below:

Complete

Section 319 Short- and Long- Term Goals

Project	State Match	Local Match	Federal	Total Leveraged Funds
Badger Creek	$ 14,832.00	$ 71,001.00	$ 112,000.00	$ 197,833.00
Big Creek	$ 14,670.00	$ 6,012.00	$ 47,000.00	$ 67,682.00
Easter Lake	$ 24,000.00	$ 113,686.00	$ -	$ 137,686.00
Lake Geode	$ 103,000.00	$ 2,482.00	$ -	$ 105,482.00
Price Creek	$ 19,348.00	$ 4,440.00	$ -	$ 23,788.00
Rathbun	$ 146,109.00	$ 265,374.00	$ 474,000.00	$ 885,483.00
Black Hawk Lake	$ 27,500.00	$ 67,637.00	$ 651,175.00	$ 746,312.00
Dry Run Creek	$ 8,625.00	$ 255,873.00	$ -	$ 264,498.00
IGL	$ 270,000.00	$ 157,000.00	$ -	$ 427,000.00
Lyons Creek		$ 11,000.00	$ -	$ 11,000.00
Silver Creek (Clayton)	$ 99,930.00	$ 25,285.00	$ 2,000.00	$ 127,215.00
Silver Creek (Howard)	$ 13,700.00	$ 107,999.00	$ 293,000.00	$ 414,699.00
Silver Lake	$ 7,001.00	$ 7,362.00	$ 30,000.00	$ 44,363.00
Tete des Morts	$ 19,000.00	$ 14,919.00	$ 45,521.00	$ 79,440.00
Union Grove	$ 14,880.00	$ 7,000.00	$ -	$ 21,880.00
Yellow River	$ 143,453.00	$ 66,379.00	$ 36,820.00	$ 246,652.00
		Total $ Leveraged		$ 3,801,013.00

Section 319 Short- and Long- Term Goals

Water Quality Trends in 2014 in Section 319-Funded Watersheds:

Table 1 below shows water trends in 2014 in Section 319-funded watersheds, based on data analyzed by DNR.

Table 1: Water Quality Trends in 2014 in Section 319-Funded Watersheds

Section 319 Watershed	Trend	Notes:	Monitoring completed:
Silver Lake (Dickinson)	Improving	water clarity (Secchi depth) has increased over the last several years.	In-lake monitoring completed through the ambient lake monitoring program
Iowa Great Lakes (Dickinson)	Stable	West Okoboji Lake continues to experience high levels of indicator bacteria at some of the beaches; however water quality in the Iowa Great Lakes remains some of the best in the state. Zebra mussels were confirmed in the chain of lakes in 2013; their impact on the lake is still unknown.	In-lake and beach monitoring completed though the ambient lake monitoring program and beach monitoring program, respectively.
Trumbull Lake	Improving	Rough fish removal and wetland creation and restoration throughout the watershed has led to increased water clarity and re-establishment of many aquatic plants at this shallow lake. The lake level is still low, so continued improvements are expected in the coming years.	Watershed monitoring completed through the ambient lake monitoring program.
Black Hawk Lake	Improving	Restoration activities at the lake and BMPs implemented throughout the watershed have positively impacted Black Hawk Lake. Vegetation has established throughout the lake; however, algae blooms continue to be problematic in the late summer.	Watershed and in-lake monitoring completed through the 319 and ambient lake monitoring programs.

Section 319 Short- and Long- Term Goals

Swan Lake	Stable	Swan Lake continues to suffer from chronic blue-green algae blooms and low water clarity from algal and non-algal turbidity.	In-lake and beach monitoring completed though the ambient lake monitoring program and beach monitoring program, respectively.
Lake Rathbun	Stable	Lake water quality has remained relatively stable in spite of considerable land use changes in the watershed as land is converted from pasture to row-cropland. BMPs continue to be installed in targeted sub-watersheds throughout the basin, which may contribute to the lake's stabilization.	Watershed monitoring completed through the 319 and section 106 programs. In-lake monitoring completed by the USACE and DNR ambient lake monitoring programs.
Carter Lake	Improving	Water clarity (Secchi depth) and chlorophyll a concentrations (measure of algal production) continue to improve. In-lake and watershed restoration efforts likely contribute to these improvements. The lake has also been treated with alum to reduce the frequency and intensity of algal blooms.	In-lake monitoring completed through the ambient lake monitoring program.
Williamson Pond	Improving	Average water clarity has improved in recent years.	In-lake monitoring completed through the ambient lake monitoring program.
Lake Miami EPA: do we have a project here? DNR: This is a WIRB project, not a 319 project.	Degrading	Water clarity continues to decline and inorganic suspended solids (non-algal turbidity) remains a problem at this lake.	In-lake monitoring completed through the ambient lake monitoring program

Section 319 Short- and Long- Term Goals

Badger Creek Lake	Stable	Poor water transparency and frequent algae blooms remain problems at this lake. High levels of inorganic suspended solids also contribute to the impairments at this lake. An active watershed project at this lake continues, with BMPs being installed throughout the watershed in hopes of improving water quality.	Watershed monitoring completed by the 319 program and in-lake monitoring was completed by the 319 and ambient lake monitoring programs.
Big Creek Lake	Stable	Several single sample maximum exceedances were observed at Big Creek Lake beach in 2014 following rainfall events. High concentrations of microcystin-LR were also observed several times throughout the monitoring season.	Watershed and in-lake monitoring completed through the 319 and ambient lake and beach monitoring programs.
Lyons Creek	Stable	Unknown	Unknown
Clear Lake	Improving	Water transparency continues to improve at Clear Lake. Inorganic suspended solids concentrations have decreased and the lake experiences fewer intense algae blooms.	In-lake monitoring through the Ambient Lake Monitoring Program
Beeds Lake	Stable	Frequent algae blooms remain a problem at Beeds Lake	In-lake monitoring through the Ambient Lake Monitoring Program
Union Grove Lake	Stable	Water transparency remains low at Union Grove Lake, however, the median chlorophyll a concentration is starting to decline.	In-lake monitoring through the Ambient Lake Monitoring Program
Dry Run Creek	Improving	Increased biological diversity observed in most recent biological sampling event	Biological monitoring through ambient biological monitoring program

Lake Hendricks	Improving	Water quality monitoring at the nitrogen bioreactor and sediment detention ponds around the lake shows high rates of N-removal and lower turbidity for water entering the lake. Water clarity in the lake has also increased in recent years.	IOWATER monitoring and ambient lake monitoring
Silver Creek (Winneshiek)	Stable	Unknown	Unknown
Yellow River Headwaters (Winneshiek)	Stable	Indicator bacteria concentrations varied greatly throughout the sampling season. Heavy rains and flooding affected the stream in the early spring.	319 monitoring
Silver Creek (Clayton)	Stable	Unknown	Unknown
Tete des Morts Creek (Jackson)	Stable	Unknown	Unknown
Duck Creek (Scott)	Unknown	Unknown	No current monitoring
Rapid Creek (Johnson)	Stable	Unknown	Unknown
Price Creek	Unknown	Concentrations of indicator bacteria remain high throughout the watershed.	319 Monitoring
Central Park Lake	Degrading	Data from the past 10 years show decreased water clarity at Central Park lake and high concentrations of phosphorus.	In-lake monitoring through the Ambient Lake Monitoring Program
Lake Geode	Stable	Watershed BMPs continue to me implemented and monitoring continued for 2014.	Monitoring completed by the 319 and ambient lake monitoring programs

Section 319 Short- and Long- Term Goals

Water Quality Trends: Statewide Waters Improving and Degrading in 2014:

Water quality trends are based on data compiled and analyzed by DNR every two years, so the water quality trends indicated in Table 2 below for 2014 are the same as the trends for 2013.

Table 2: Statewide Waters Improving and Degrading in 2014

ADBCode	WBName	Cycle	Trend	Notes:
IA 02-IOW-00390-L_0	Lake Macbride	2014	Degrading	Removed pH impairment for the lake (suggests improvement); however both the Secchi and chlorophyll a TSI values and increased since the 2012 assessment/listing cycle (suggesting degradation). A fish kill also occurred in June of 2011.
IA 04-RAC-01750-L_0	Beaver Lake	2014	Degrading	Both the Secchi and chlorophyll a TSI values increased by at least 3 between the 2012 and 2014 assessment/listing cycles suggesting water quality degradation.
IA 03-NSK-00242-L_0	Diamond Lake	2014	Degrading	Secchi TSI went from 63 in 2012 to 67 in 2014, resulting in an impairment at Diamond Lake.
IA 04-LDM-00490-L_0	Easter Lake	2014	Degrading	Chlorophyll a and Secchi TSI values have been increasing steadily over the lake 10 years. The bacteria impairment was added for the 2010 assessment/listing cycle and remains impaired for indicator bacteria.
IA 02-IOW-00660-L_0	Green Castle Lake	2014	Degrading	Chlorophyll a and Secchi TSI values increased dramatically between the 2012 and 2014. Both TSI values were listed as 48 for the 2012 listing cycle. For the 2014 cycle, the Secchi TSI is listed as 64 and the chlorophyll a TSI is listed as 59. The pH impairment at this lake is suggested for de-listing for the 2014 cycle.

IA 05-NOD-00550-L_0	Lake Icaria	2014	Degrading	Secchi TSI went from 64 to 66 between the 2012 and 2014 assessment/listing cycles, thus re-applying the previously removed turbidity/siltation impairment. Information from the Fisheries bureau shows that a rough fish population has re-established in the lake.
IA 04-LDM-02296-L_0	Red Haw Lake	2014	Degrading	Secchi and chlorophyll a TSI values both went from 52 to 62 between the 2012 and 2014 assessment/listing cycles. Numerous changes in land use from pasture to cropland throughout the watershed could help to explain the lake water quality changes.
IA 05-GRA-00810-L_0	Little River Watershed Lake	2014	Degrading	Secchi TSI increased from 67 to 75 between the 2012 and pending 2014 assessment/listing cycle. Chlorophyll a has remained relatively low, and the algae impairment previously listed for this lake was removed in 2012. High non-algal turbidity at this lake may be a product of considerable recent land use changes from pasture to cropland throughout southern Iowa.
IA 02-CED-00470-L_0	Mitchell Lake	2014	Degrading	The Secchi TSI increased from 59 to 63 between the 2012 and 2014 assessment/listing cycles. The chlorophyll a TSI increased from 56 to 63 between these two assessment cycles. A large population of cyanobacteria at this lake suggests that algae blooms are a growing problem for this lake even through phosphorus levels are relatively low.
IA 01-MAQ-00680-L_0	Silver Lake	2014	Improving	Secchi and chlorophyll a TSI values were both listed as 69 (above the impairment trigger) for the 2012 assessment/listing cycle. Both TSI values decreased substantially for the pending 2014 listing cycle, and are listed as 56 for Secchi and 58 for chlorophyll a. If the lake continues to improve, it will be de-listed for algae in 2016. The dissolved oxygen impairment is suggested for de-listing for 2014, but the pH impairment remains (29% of samples collected violate the pH standard).
IA 01-TRK-02245-L_0	Lake Meyer	2014	Improving	The chlorophyll a TSI improved from 65 to 63 between the 2012 and 2014 assessment/listing cycles. If the lake continues to improve, it will be de-

				listed for algae in 2016.
IA 04-UDM-0510-L_0	Fourmile Lake	2014	Improving	Chlorophyll a TSI went from 69 in 2012 to 60 in 2014. If this wetland continues to improve, it will be de-listed for algae in 2016. Restoration activities completed in 2008 and 2009 have likely contributed to improved water quality at this wetland.
IA 06-LSR-00315-L_0	Dog Creek Lake	2014	Degrading	Secchi was improving steadily between 2000-2010, however the TSI for Secchi went from 55 in 2012 to 62 in 2014.
IA 05-NOD-00415-L_0	Binder Lake	2014	Improving	This assessment and "improving" status are based on information from the DNR Fisheries bureau in April of 2012
IA 05-NSH-00310-L_0	Cold Springs Lake	2014	Improving	This assessment and "improving" status are based on information from the DNR Fisheries bureau in April of 2012
IA 05-CHA-00620-L_0	Corydon Reservoir	2014	Improving	This lake continues to show improved water clarity and has maintained good water clarity for both the 2012 and pending 2014 assessment/listing cycles. The turbidity impairment at this lake is suggested for de-listing for 2014.
IA 06-LSR-00790-L_0	Crawford Creek Impoundment	2014	Improving	Algae impairment de-listed in 2012. For the 2014 cycle, Secchi and chlorophyll a TSI values both decreased from 60 to 57.
IA 02-IOW-04095-L_0	Crystal Lake	2014	Improving	Secchi TSI improved from 71 to 56 between the 2012 and pending 2014 assessment/listing cycles. The median inorganic suspended solids decreased greatly, which is reflected in the increased water transparency.
IA 06-LSR-02420-L_0	Dan Greene Slough	2014	Improving	Restoration activities were completed at Dan Greene Slough. As a result, the median total suspended solids at this wetland decreased from 86 in 2012 to 3 for the pending 2014 assessment/listing cycle. Median chlorophyll a TSI values also decreased substantially from 80 to 57 between

				the two assessment cycles.
IA 06-WEM-00340-L_0	Desoto Bend	2014	Improving	Secchi and chlorophyll a TSI values decreased between the 2010 and 2012 assessment/listing cycles and have remained low for the pending 2014 assessment/listing cycle.
IA 04-LDM-00995-L_0	Lake Wapello	2014	Degrading	Secchi TSI values went from 52 for the 2012 assessment/listing cycle to 63 for the pending 2014 cycle. Numerous changes from pasture to cropland throughout the watershed may help to explain the changes in lake water quality and decreased water transparency.

FFY13 Pollutant Load Reductions:

Iowa's FFY13 Annual Pollutant Load Reductions for BMPs completed in Section 319 Project Watersheds, submitted to EPA on February 15, 2014, were as follows:

Sediment: 14,806 Tons/Year
Phosphorus: 32,244 Lbs/Year
Nitrogen: 63,256 Lbs/Year

FFY14 Pollutant Load Reductions:

Iowa's FFY14 Annual Pollutant Load Reductions for BMPs completed in Section 319 Project Watersheds were as follows:

Sediment: 7,191 Tons/Year
Phosphorus: 11,019 Lbs/Year
Nitrogen: 16,480 Lbs/Year